

Ed Fowler's

Knife Talk II

The High Performance Blade



Knifemaking's great craftsman shares his secrets

- Visit the world of knives, its people, its legends
- Learn the latest about forging and heat treating
- Revisit Fowler's favorite columns from *BLADE* Magazine

Ed Fowler's

Knife Talk II

The High Performance Blade

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Steve Shackelford, editor of *Blade*, and I continually lock horns as these articles develop from my thoughts about knives to the finished article. He knows about verbs, pronouns, and the stuff that makes words become articles. Many times, his thoughts raise my blood pressure for a time, but as our thoughts blend to the finished product, the destination becomes more comprehensive and understandable. Thanks, Steve!

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Credit must go to the countless fellow knife makers from both the past and present who share thoughts through their knives that may be thousands of years old, being made today, or existing only in dreams of tomorrow. Artisans, in a timeless community bound by a common joy: the knife.

Foreword

A book, our book, yours and mine. I have journeyed through the world of knives and visited many fine people, places, and thoughts.

Dedication

To Angie and the many who have encouraged me to continue my quest or, more correctly, our quest. Clients, friends, those who simply wanted to share thoughts, and the environment I am privileged to share with nature and tools that must work.

Introduction

Welcome to the world of knives. Knife and man have developed together, from the Stone Age to today. As you read these words, man and knife continue as partners in the art of life. The knife has always been a part of the good times: the hunt, the harvest, the making of clothing and shelter. Lady knife has also been with man in times of hardship, where survival depended on planning, luck, skill, and competence. Sometimes man and knife survived, other times they failed; still they were together.

Man and knife is a relationship that is as simple or complex as the human side of the partnership wishes to become involved. The visitor to the world of knives enters of his own volition. He can choose to explore the most remote and complex frontiers or simply scan a map of the territory. The legends of Excalibur and The Iron Mistress are equally as boundless as the pursuit of the High Performance Knife. If you choose to enter the community of the world of knives, you are welcome; the rewards will be up to you. The world of knives has only one rule: Enjoy the voyage.

Contents

There are many facets of knives; no knife stands alone. While attempting to place articles in specific categories for the purpose of the book, many times we found them difficult to categorize.

This is the way it should be, for the knife is a complete package. Nothing stands alone, a community, if you will. All go together.

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Chapter 1



Function, Design, and Techniques

These are some of the serious and practical thoughts about using a knife, including knife function, safety, and maintenance. The high performance knife is only as good as the man who uses it. Still, the man who needs a knife can make the knife sing in his hands when they join in a true relationship dedicated to function. Some fight their partners and waste a lot of energy while others are able to work with their partner in harmony. It takes some learning, but it is all common sense once you get the hang of it. All partnerships start out through the selection process, and then grow when the right decisions, followed by practice, come together to form a team.

What To Look For In A High-Performance Knife

The rigors to which some blades were subjected convey the true meaning of high performance

Author's note: I am not trying to promote my knives by relating the events in the following, but rather to provide a complete understanding of my conception of the high-performance blade.

It seems as if a continuous battle rages between the stainless and carbon steel brothers in the world of knives. Most of the contention between the two factions arises from the expectations each has of its knives. Both sides have trouble keeping their expectations in perspective.

To many of the stainless steel clan, performance is what a knife does *not* do—that is, it does not rust too easily. They are willing to sacrifice qualities such as cut or tough for the benefits of a maintenance-free knife. There is nothing wrong with their selection of steel or expectations of performance; it is a simple matter of choice or individual preference. However, when they claim that the performance qualities that the carbon steel culture worships come under the realm of abuse, hackles rise and communication ceases. A second issue is the fre-



Taxidermist Eric Anderson with the moose rack and Fowler knife he used to cape the animal's head. He also used the knife to field dress four antelope, including splitting the pelvis of each animal and cutting the chests open by severing the costal cartilages between the ribs and sternum. He also skinned, headed, and legged the antelope.

quent and often exaggerated advertising claims concerning the "heartbreak of rust." This issue influences many in the world of knives, instilling unwarranted fear and apprehension on the part of the knife consumer. Even knifemakers yield to the fear. (There was a time when even I was ashamed to admit that a carbon steel blade could rust.)

I consider maintenance of any tool a responsibility, a privilege, an art form, a serious aspect of pride of ownership, and an opportunity for sincere participation in the nurturing of a good friend—the knife. As time and task pass, man leaves his personal signature on his knife, visible for any with vision to see long after man has passed from the partnership.

The virtues claimed for the stainless-steel knife remind me of a book written some years back. Some readers may remember the movie based on the novel, *The Stepford Wives*, in which the wives were transformed from those with free wills to absolutely obedient robots. While, on the surface, the world portrayed in *The Stepford Wives* might seem like utopia to some, life could get a little dull if that were the way it always was with knives and women.

**"When many
evaluate knife
performance, they
are shooting a
little low."**

Do not get me wrong. I have nothing against stainless steel. I do not feel that it has the beauty of the carbon steel in my grandmother's silver fruit knife that it replaced, though I do feel that it has a place in civilization. Mankind has entered a new era of the disposable knife, where many

who were never taught good cutlery etiquette let their blades soak in soapy water for hours rather than take three seconds to wipe them off, dry them and put them in the knife rack. Today, most kitchen knives spend their time bouncing against other blades and culinary hardware in the drawer. My grandmother was proud of her knives because they were sharp and cut well. She also took pride in her care of them. Today, many knives are judged primarily by appearance and glitter, with performance only an afterthought or theoretical assumption.

"Civilized man" is beginning to lose perspective when it comes to evaluating a knife. A lot of blades, both factory and custom, have great reputations that I feel are not warranted. Part of the problem comes from the fact that when many evaluate knife performance, they are shooting a little low. Many park bench conversations evaluate knives solely on their



These two knives were forged to be the same before being overheated. The top blade was cold forged to shape. Note the raised tip—only the cutting edge was cold forged. The blade at bottom was ground to shape. At one time, the blades were the identical shape.



Troy Rogers begins to skin a deer. Note his grip on the handle, with his index finger in front of the guard. "He won't get 'bit' using a knife this way," Fowler observed. "Troy is a professional. He won't take a chance on using a knife without a guard." In the other photo, Troy is well into the skinning operation.

performance at the simple task of dressing out a single animal without needing sharpening. Anyone who has dressed out several hundred animals knows it does not take much of a knife to do the job. Stone-age man butchered game for thousands of years with his teeth and a sharpened rock. This does not mean that the knife that only dressed one deer without the need to be sharpened is not good enough for an individual. If this level of performance is enough for him, fine, but to call the knife a high-performance blade is an overstatement of fact. I feel that *high performance* needs to be carefully evaluated based on empirical testing, both at the time the knife is made and then in the field, in order for a rating of potential performance to be valid and reliable. I intend to discuss some aspects that I feel are required of a high-performance knife.

Functional Balance

The most important attribute of the high-performance blade is what I call *functional balance*. In the "Willow Bow Dictionary" of knife talk, this simply means the blade is designed and constructed with the greatest potential task as the guiding light.

**"I requested
that he keep a
record of the
knife's
performance."**

As there are many kinds of knives, I will limit my discussion to those with which I am most familiar, namely, high-performance field knives. My conception of a field knife is one that would make man a dependable and absolutely faithful companion at work, hunting, fishing, camping, or simply seeking to enjoy being a part of his natural heritage.

It would be a monumental task for me to describe—and you to read—all the variables that need to be considered and the choices the knifemaker must make in the development of a high-performance blade. For example, years ago I decided to relate, in story form, the many issues to be considered in the design and construction of only the tip of a blade. Six thousand words later, I still had not considered all the alternatives, and the end was not in sight. I deleted the story from my computer.

There are many facets of the high-performance knife. One essential attribute is its ability to cut. Recently, I gave two blades to professionals, asking them to keep a record of how the knives performed. One of the blades went to a taxidermist, Eric Anderson, a neighbor of mine and owner of Tim-

berline Wildlife Taxidermy. The blade I gave him was forged from a 3-inch ball bearing of 52100 steel, using my construction methods that have been covered in BLADE® many times.

Due to an error on my part, the blade was defective. After forging and normalizing my blades, I soak them at 1330°F for two hours and allow them to cool slowly to room temperature in my Paragon oven—a process I call a *bladesmith anneal*. I inadvertently soaked several blades for two hours at 1880°F—650°F hotter than planned. I polished and etched one of the blades. Etching revealed that the grain structure had grown very large, and, after this kind of “abuse,” I did not know of any way to save the remaining blades. I decided to experiment with them and learn what I could.

One of my fellow ABS master smiths, Joe Szilaski, had been doing some experiments with a process called *cold forging*. Joe and I had discussed the many variables that could be involved in the process. I decided to cold forge one of my blades, then harden and temper it in my usual manner, and see how that would influence its nature. The resulting blade cut rope very well, about four times better than a second “burned” blade that was heat treated the same as the first, but without being cold forged. I was going to break it to test its strength and toughness, as well as to examine the crystalline structure of the blade, when Eric stopped by the shop for a visit. He looked at the blade and said that it was exactly what he wanted for a caping knife. He requested most emphatically that I should not break the blade. As he is a good friend, I put a guard and handle on it and gave it to him. The blade was marked “experimental, cold forged.” I requested that he keep a record of the knife’s performance. Recently, he gave me the first results of his testing.

Test Results

Without sharpening the blade, Eric field dressed four antelope, including splitting the pelvis of each animal and cutting the chests open by severing the costal cartilages between the ribs and sternum. He also skinned, headed, and legged the antelope.



Obviously, any knife that lays claim to the title of “high performance” must be able to cut, and cut well. Here Fowler uses a vintage Marble’s blade of high carbon steel to make short work of a length of rope.

“I ground the blade several times developing the various convex profiles I wished to test.”

The next task was to cape a Wyoming bull moose. This is one job that is a supreme challenge to the cutting edge, as it requires the constant cutting between bone and moose hide that is very

tenacious and hard on knives. Usually the operation requires three sharpenings on an average knife. Eric was able to cape the moose and, when finished, the edge would still slice paper efficiently. All the tasks were completed without touching the blade to a steel or stone.

As the knife is now Eric’s, I cannot test the blade’s toughness by flexing it to 90 degrees or more. All I can claim for the knife’s performance ability is that it cuts very well. Eric asked me to sharpen it for him. In three minutes, his Norton Fine India stone and I had the knife back to the original shaving edge—which also qualifies the blade as easy to sharpen.

The second knife also was forged from a 3-inch-diameter ball bearing. A 7-inch blade, it originally was intended to become a model I call my Camp Knife. I had used it for some extremely severe cut-

“The objective of a high-performance knife is to exceed the owner’s expectations.”

ting tests, exploring various functional aspects of the convex grind by changing the blade’s geometry. I ground the blade several times, developing the various convex profiles I wished to test. By the time the tests were completed, the blade was too thin for my version of a camp knife.

Troy Rogers owns and operates Riverton Ice and Cold Storage. During the local big-game season, he processes moose, elk, bear, deer, and antelope, and throughout the year butchers domestic American bison, cattle, sheep, and hogs. Troy is a regular visitor to the ranch. Many times I have reground the factory-made knives he uses at his plant. Troy had witnessed some of the testing I had done on the blade and literally had fallen in love with her. When I told him that the knife was destined for some destructive tests and invited him to watch, he requested that I give it to him and let him do some tests with it, using it for what it had become—a nice butcher knife. He agreed to keep records of the blade’s performance in his packing plant.

After the local big-game season started, Troy worked 18 hours a day processing game. He brought his first report on the blade’s performance. Without touching the cutting edge to a stone, the knife skinned, legged and headed at least 80 antelope, 27 elk, 23 deer, and eight moose for a total of 138 animals. These figures are a minimum estimate based on a carcass count. It is obvious that things were a little hectic during the 14-day test. Some other carcasses came in partially skinned, while others required some cleaning up.

Troy trimmed meat around bullet holes and used the knife for many associated tasks as he prepared the carcasses for cooling and cutting. He is a professional. He knows well the art of using and maintaining a knife. He steeled the edge using an F. Dick steel that he had customized by smoothing it out to a very fine surface with 180-grit sandpaper.



Joe Szilaski: A true mastersmith who brings a beautiful blend of traditional European craftsmanship to the world of knives is shown here testing one of his blades for strength and toughness. Needless to say, the blade passed—and more.

The knife previously had passed some extremely demanding tests requiring high levels of toughness and strength. It then proved itself beyond my expectations on wild game. In my opinion, the knife definitely qualifies as a high-performance blade in this application. While most of you who read this would never have the opportunity to work this many animals, the objective of a high-performance knife is to exceed the owner’s expectations. By proving her performance qualities in marathons such as this, you can be confident she is able to serve man well.

Cut is only one aspect of the high-performance knife. There are many other issues to consider. First, the knife must be designed in such a manner that is consistent with the blade’s intended use, or possess functional balance. Troy and Eric, both skilled professionals, selected knives they felt possessed the functional balance for the work they needed them to do.

What to Look for in a High-Performance Knife – Part II

Knife safety, knife use—and abuse—and much more are topics for makers to consider

Author's note: I am not trying to promote my knives by relating the events in the following, but rather to provide a complete understanding of my conception of the high-performance blade.

Any tool of man must be designed to be as safe to use as possible. I feel that a full guard is an absolute requirement on a high-performance knife. The knife I made for Troy Rogers—Troy is my friend and customer who tested one of my pieces in part one of this story—has a full guard and is therefore safe as possible. Troy's processing plant is only a mile from the hospital, but a cut hand would be very inconvenient and, at the height of game season, an economic disaster.

I feel that, for field use, a knife must be capable of any task that circumstances demand. It is impossible to abuse a knife when you are desperately trying to survive unexpected challenges. A knife that is made with what I term high performance in mind also can make life a little easier at times.

Last summer I was on a tractor baling hay. While watching the windrow—the row of cut hay—behind me, I drove the tractor too close to an irrigation ditch in the corner of the field and dropped the rear wheel into the ditch. The tractor was high centered with the draw bar on the ditch bank. I had two choices: Walk about a mile to get another tractor and a chain and pull the tractor out, or fix it with what I had. There was a pile of old fence posts on



According to the author, one of his knives was taken into a remote region on an elk hunt—led here by Mike Miller—and, after a game saw and hatchet designed especially for the job failed, was tough enough to split the vertebrae of an elk until the animal was cut completely in half.

**“For field use,
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the other side of the fence that I could put under the tractor tire, dig the dirt from under the draw bar, let the tire gain traction on the pile of posts, and drive out. I used my knife to dig the dirt from under the draw bar and was back baling hay in about a half hour. The task wasn't real easy on the knife, but it made the day a little shorter and I was able to resharpen the blade in about five minutes when the day was done. I would have used a shovel if I had one but I didn't. The knife was good enough.

Quality Control

Another critical aspect of the high-performance field knife is an absolute dedication to quality control. The knifemaker must be able to test each and every blade he makes for cut and edge flex at the time he makes it, preferably before he dedicates the time and materials into finishing the knife. It is too tempting for a maker to sell a faulty blade when he has put the time required into finishing the knife. It is best for the maker to test his blades as soon as he can, and either correct the problem or destroy the ones that do not pass muster.

I feel that there should be no secrets in the high-performance blade. It should read like a book. Etching the completed blade reveals the true nature of the steel to both the knifemaker and the client. There is no other absolutely reliable method of providing such information on each blade that is so readily available to the majority of knifemakers in their shops. By etching all his blades, the maker also will become more proficient in his heat-treating methods.

In addition to testing every blade for the basic requirements of cut and edge flex, the maker should test a representative sample of his blades to the point of destruction. I usually test one in 30 blades to the limit. While this may seem like a terrible waste, when a maker is selling a high-performance knife, he must do all in his power to assure top quality. I have not had a blade fail for some



Fowler said that in order to be classified as “high performance,” knives should be able to handle a variety of chores besides cutting. Here, in temperatures of -10°F, he uses one of his knives to chip a sheep head out of the ice in Wyoming.

time, but the testing still goes on. This does not absolutely negate the possibility of a faulty blade leaving the maker's shop, but it does guarantee that the maker is doing his part to ensure the client's confidence in his knives.

By developing quality-control testing procedures that can be accomplished in his shop when the blade is made, the maker receives immediate feedback concerning his methods. Immediate feedback is an essential element contributing positively to the learning process and to the development of new skills.

Field-Testing For Longevity

Years ago I felt I had achieved the ultimate blade by brazing an oddball alloy onto the surface of some damascus steel I had made. Tests conducted immediately after making the blade indicated that it cut better than any damascus blade I had tested. I could not wait to show it off.

Several months later, Wayne Goddard came to my shop and I handed him the blade to test on some hemp rope. Wayne tried to cut with the blade while I anxiously awaited his accolades. After a few attempts at cutting the rope, he said, “This knife won't cut!”

“You are kidding,” I shot back in disbelief.

“No, I am not kidding,” he repeated.

I handed him a stone and suggested he sharpen the blade and try again. He and I repeatedly sharpened the blade and tried to cut with it. The blade

“The maker should test a representative sample of his blades to the point of destruction.”

would not make one slice on the rope. After a few more attempts to make it work, I acknowledged the obvious: The knife would not cut. After much consideration, I came to the conclusion that the blade, when it was new, was truly a high-performance one. After a few months in my shop—which at the time wasn’t heated—the nature of the steel had changed due to time or temperature fluctuation, or both. It was a lesson well learned.

Whenever any potentially significant changes are made in the knifemaking process, the resultant blade should be subjected to thorough testing over a period of time, use, and environmental conditions before it can be sold to a customer. As a result of this experience, I carried and used hard my first completed multiple-quench 52100 blade for some time before I offered one for sale.

Strength & Toughness

I feel that the all-around high-performance field knife must be designed and constructed in such a manner as to enable man to effectively deal with most any situation he may face in the future, whether presented by design or accident. The high-performance field blade must be tough enough that it will bend rather than break. A broken blade is of no use whatsoever. A knife that breaks has failed. Blades intended for hard use also should be strong enough that they cannot be flexed beyond a minor deviation without the added leverage of an extension to the handle. This degree of strength provides the man who may have to rely on the knife an added margin of dependability.

Last year, my attorney, who had accepted one of my knives as payment for legal fees, was hunting elk with three other men. They had packed into a remote region on horseback and set up camp. The next day they shot and killed two bull elk, but the place where the animals fell was virtually inaccessible. Fallen timber and a rock slide prevented the hunters from getting horses within a mile of their harvest. They had to hike in and dress the elk out, then quarter the bulls and pack them to the horses. They had a game saw and a hatchet with them. Unfortunately, both of these “trinkets of the big-game hunting market” failed when the hunters tried to split the first elk. My attorney—Tom is his name—decided to put my knife to the test.



The author says the knifemaker must be able to test each and every blade he makes for cutting and flexing ability—the author does the latter here—at the time he makes it. It is best for the maker to test his blades as soon as he can and either correct the problem or destroy the ones that do not pass muster.

They tied the hind feet of each elk to two trees, putting some tension on the spine. Tom held the knife inside the body cavity of one of the animals with the edge centered on the first vertebra, while his brother used a tree limb to beat on the spine of the blade that protruded outside the elk’s back. One-by-one the vertebrae separated and the hunters were able to split the animal in half.

While this may sound like a Herculean feat, when you understand how the spine of an elk grows, they were cutting with the grain of the bone in the center of each vertebra. Due to the geometry of the blade, the sides of the convex blade were doing the work, splitting the bone ahead of the cutting edge. A high-performance blade is not simply ground to shape but carefully sculpted by visions of performance realities. The blade was tough enough and designed for the task.

An interesting sidelight occurred when Tom brought the knife to my shop for cleaning up after the hunt. He said that the edge had chipped! I examined



A true high-performance knife is one that performs both a variety of cuts and offers an array of hand holds.

the blade and could feel two small dents in the edge. Tom stated that he had inadvertently bounced the edge against some rocks while skinning the elk. Wanting to show off a little, I told Tom that I would fix the dents by working them out on my anvil with a small ball-peen hammer. Tom wouldn't let me do it, stating that he didn't want me to "abuse" the knife, requesting that I clean the edge up with my sharpening stone instead. I tried to convince him that the knife was born on the anvil, but he would not listen. Tom timed me while I resharpened the blade. It took eight minutes to hone out the dents and sharpen the edge. The high-performance field knife must be easy to sharpen.

Other High-Performers

Other makers seek and achieve high-performance blades. While experimenting with the multiple-quench process, Bill Burke of Salmon, Idaho, recently achieved a blade that flexed 90 degrees over 50 times, each time returning to straight. This knife is now in the hands of a butcher who is thoroughly testing its qualities cutting meat.

I have related these events only to bring understanding to what I feel are some essential attributes of a high-performance knife. Any maker can achieve these qualities in his blades, though they aren't qualities that are easily accomplished. It takes time and dedication and involves a lot of learning but, if high performance is the goal a

"Any maker can achieve these qualities in his blades, though they aren't qualities that are easily accomplished."

maker wishes to achieve with his knives, it can be done.

A friend of the late Dick Iiams hard-surfaced oil-field drill bits, bulldozer tracks, and other heavy-duty steel tools for a living. Dick's friend made a knife that could literally chop a burned-out oxygen cylinder in half. The blade was bull strong, crude as they come and would have challenged a hydraulic press in a flex contest. I judiciously

used my earplugs and safety glasses while witnessing an extremely dramatic cutting demonstration that proved the man's knife was up to the task. This was his dream of a high-performance blade and he succeeded.

Any maker who wishes to make high-performance knives can achieve his goals by simply using his knives to do what he intends them to do. The high-performance knife will continue its evolution to perfection as long as the maker seeks to make the best knife for the job. Simple testing can be very revealing—just use the knives to cut what they are intended to cut. Experiment and test relentlessly. There is a lesson to be learned by every failure. Each maker must take his time and keep his mind open in order to recognize success. He should keep accurate notes and take nothing for granted. The essence of high-performance knives is not a thing to be captured, but forever sought, nurtured, and carefully groomed. Each maker should explore the frontiers of his steel thoroughly and, most important of all, enjoy the voyage.

Design: Linchpin of Knife Safety

During hunting season, the emphasis should be on knife safety—and a good place to start is with knife design



The oval guard on this packing plant skinner does not get in the way and still provides a significant degree of safety. While Fowler said he would never carry a skinning knife as his primary using piece, it is good for what it is intended—skinning.

If you are like me, you like to read and talk of heroes, those magnificent human beings who run into burning buildings, dive into freezing waters, or leap into the path of a stampede to rescue folks in danger. Heroes bring out the best in man.

But heroes risk their own lives and sometimes lose them, too. Where possible, the need for heroes must be prevented, because the events before and after the fact can be too costly. Safety through environmental design is the responsibility of all blade enthusiasts. In the world of knives, everyone involved can contribute.

While going to college, I worked many jobs, most of which contribute to the thoughts I share with you through the pages of *BLADE*®. During the late 1950s and early '60s, one of my part-time jobs included working for an ambulance service.

One fall day a call came in for an ambulance to meet a four-wheel-drive pickup racing to town with

an injured hunter in the bed of the truck. The caller reported that the hunter had suffered a severed artery and was in bad shape.

I headed for the mountain road and had no trouble spotting the pickup in question—the dust cloud it was raising was visible long before the truck came into view. There were three men in the bed of the pickup: the injured party, another with his bloody arm extending from the pelvis of the injured man, the third working at keeping everybody calm in the middle of the hurricane of events.

I was told that the injured man had been trying to split the pelvis of a bull elk and had pulled his knife through the elk's pelvis and into the vicinity of his own pelvis, severing his femoral artery. His friends had been with him and, when the profuse hemorrhage became evident, one of them had inserted his hand into the wound and, by virtue of a lot of luck and providence, was able to stop the bleeding.

Stopping a femoral bleed of this nature is next to impossible without the aid of a skilled surgeon and a lot of equipment. A quick discussion among us reinforced our belief that we should keep with what was working, and the injured man's friend should keep hold of the artery. Since it was cold in the bed of the pickup, transfer to the ambulance was absolutely necessary for the 50-mile trip to the hospital.

With a lot of planning and coordination, we transferred the injured man into the ambulance without his friend losing control of the severed artery. The hunters were college football players, linemen—big, strong, and used to teamwork. As we headed for the hospital, above the howl of the siren our conversation was not much more strained than that of a friendly poker game, mostly aimed at maintaining the morale of the injured man and the friend who was keeping his lifeblood off the ambulance floor.

Arriving at the emergency entrance to the big city hospital, we were greeted by an obviously important and angry intern who immediately ordered the man with his hand in the wound to "get his filthy hand out of that wound!" The third hunter, I believe he must have played guard, standing about 6-foot-6 and weighing more than 300 pounds, advised the intern that "no snot-nosed twerp was going to cause his friend's death, and that nothing was going to happen until his friend was on an operating table and a competent surgeon was ready to go to work." The intern wisely left. Soon a surgeon appeared and they proceeded to the operating room, where all went well. The injured man's friend was a hero; he had not only found but held onto that femoral artery for over three hours! The muscle cramps in his forearm were considerable.

The remedy for this kind of accident is education. Splitting the pelvis on an animal you are field dressing is not necessary. It is just as simple to core the rectum, tie it off and pull it through as you remove the intestines from the body cavity. I personally always split the pelvis when field dressing simply because an old rancher taught me how to do it the easy way. Place the knife tip on the top of the joint on the ventral surface of the pelvis, cutting edge up, with the animal lying on its back. Start about 1/2-inch back from the aspect of the pelvis farthest from you, using the knife tip as a wedge and driving it down through the joint by hitting the butt of the handle with the palm of your right hand.

"He held onto the femoral artery for over three hours!"



This fine old Case kitchen knife does not need a point to do the work for which it is intended.

Repeat this action, moving the tip successively back into the unsplit portion of the pelvis until the task is complete. The spine of the blade does the work, saving the cutting edge for the rest of the job.

It is not necessary to apply any excessive force to the knife. In fact, applying excessive force to a knife is another source of accidents. Had the hunter been aware of either of these methods, the accident would not have happened.

I detest knife accidents. They can cripple and, in an instant, change the lifestyle of the injured.

Whenever I become aware of a knife accident, I ask all the questions I can. How did it happen, why, and how could it have been prevented? Then, as in this case, I ponder over the events for years.

Safe By Design

While knife accidents will continue to occur, I strongly believe that makers can have a significant influence in reducing the severity and frequency of the accidents by providing knives that are designed

to be as safe as possible. In addition, makers should take the time to educate those who want or need to know about the proper use of man's favorite tool, the knife. That the design of knives can and does influence the degree of risk to those who will use them has long been understood by those who carefully study issues of safety in design.

Some time ago I bought an aged bread knife made by Case from Bernard Levine. I was impressed with its design but wondered why it was made with a blunt tip. After using it for the past five years, I have realized that a sharp point is not needed on this type of knife. I use the blade in the morning slicing bread for my toast. The knife is usually stored in a hanging wall mount, about head high, next to the kitchen sink.

One morning I reached up to remove the knife from its perch. However, the blade hung up ever so slightly as I pulled it from the rack and my hand slipped from the handle, the knife falling to the floor. Not wanting the precious, antique blade to bounce on the floor, I tried to grab it in mid air, an obvious error on my part. I caught the knife but the momentum of my hand drove the blunt tip into my belly. Had Case included a sharp point on the blade, it could have cut me seriously. The blade without a point is now more greatly appreciated. Thanks, Case, for offering a bread knife, a time-honored design that does not have a point on the blade and does not need one. Sharp points are necessary for many knife tasks but not all, especially around the kitchen.

As for trying to save the knife by catching it in mid-air: It was foolish on my part, yes, but a reflex action is hard to control. That is why safety by design works. It kicks in when the mind shorts out. By using knives that are designed with safety in mind, the odds of getting through such an event are more in your favor and it just might make a difference.

Many issues of knife safety and design are not clear cut. Wrist thongs on knife handles are one such issue. A wrist thong can reduce the probability of loss of the knife when using it over water, or prevent the knife from flying across a room full of people in rope-cutting demonstrations.

A wrist thong can also pull a knife from its sheath when its user is walking through brush. Wrist thongs do not always provide a measure of safety. Wayne Goddard related one such instance.

A gentleman was walking into his kitchen carrying some pheasants in his hands, along with his knife. The wrist thong caught on the door knob and pulled the knife through his hand, cutting his hand. Personally, I do not like wrist thongs and would rather be able to get away cleanly from a knife.

Guarded Moments

I would not willingly choose to carry a knife in the field as my primary tool unless it had a full and comfortable guard to protect my hand from accidents. One afternoon I was talking knives with a man who previously had worked for many years in a packing plant skinning beeves. He showed me his hand and there was a nasty scar on the palm. His crippled fingers did not fully extend and the severity of his accident was obvious.

He told me that he had skinned cattle eight hours a day, five days a week, for over 15 years, and one day his hand slipped from the handle and he "could not get away from the knife fast enough." He was cut to the bone. Several surgeries failed to restore full function to his hand and he had to change occupations. Needless to say, he felt guards were absolutely necessary on his working knives. Still, guards can be inconvenient in many functions. Every kind of knife has its place.

All issues of safety are matters of give and take. Anything you add to a knife takes away from another function. Therefore, there are few absolute rules concerning safety and design. All are a personal choice. The challenge is to keep your brain working whenever you are around any tools, and make decisions about design based on knowledge rather than by accident.

I fully realize that not all clients of knifemakers will want a knife that is designed as safe as possible. I do feel that knifemakers can do their part to provide as many safety features as they can in their knives, and, when talking with clients, to do their part to educate all who will listen. Also, whenever makers hear about a knife accident, they should ask as many questions as they can, determine the nature of the accident and consider any elements of design that could have prevented or lessened the accident, and they will be doing their clients a favor.

**"The challenge is
to keep your
brain working
whenever you are
around any tools"**

Carbon Steel: A Proven Survivor Displays its Worth

*Fowler's favorite blade material may stain but
that's just one of its badges of honor to him*

When I read articles about how carbon steel rusts and that proclaim the virtues of stainless steel, I feel like an old coyote. I once watched crossing a pasture filled with mares, young colts at their sides. Normally, a coyote would avoid such a situation at all costs but it was opening day of duck season, and the peaceful countryside was filled with hunters. Someone had shot at the coyote and he had more serious problems where he'd been than where he was going.

The first mare to spot him gave a squeal and took off after him, her warning summoning every other mare in the pasture to help defend the young colts. The pasture contained about 100 acres and at least 75 adult horses, all of the latter after the coyote. His was a spectacular display of broken-field running. They cornered him several times and he took some pretty healthy kicks from front and hind hooves, even getting tossed into the air once!



Benny Carroll, a veteran Wyoming guide and hunter, taught Fowler to smear fat from game on a carbon blade to protect the steel, here on an old Frank Richtig kitchen knife.

With his tail between his legs and all the dog speed he could muster, the coyote ducked under a fence and tried to jump a partially frozen slough. He took a long leap, not quite making it to the other side, broke through the thin ice and swam the rest of the way, parting the frozen slush as he went. He climbed up on the bank and shook most of the water off. One ear laid flat on the side of his head and he looked pretty pitiful. He glanced back at the horses, who were standing at the other side of the fence, continuing to display their outrage.

I was standing in some brush less than 20 paces from the coyote. He started to lick his wounds when he caught my scent. He stared at me and I commented that it looked like he was having a pretty tough day. He headed north and it wasn't five minutes before I heard some more shots from that direction.

The carbon steel blade, like the coyote, is a proven survivor. It has survived and will continue to survive in spite of its oft-proclaimed reputation—thanks to its stainless rivals—of a blade that rusts.

Stains As Flakes?

I was brought up with carbon steel knives and can never remember one of them rusting. I consider a stain on a blade of no greater significance than a suntan on my skin.

I always thought that the folks calling for stainless blades were kind of like the people who invented dandruff shampoo. At the time they started trying to sell the shampoo, most folks didn't really care if they had dandruff or not. As a result, dandruff-shampoo sales were pretty slow at first. Finally, advertisers began talking about the "terrible tragedy of dandruff," and folks started buying dandruff shampoo—but not before they'd been sold on the idea that dandruff was bad.

The stainless steel knives I tried during my youth failed to impress me and I went back to carbon steel. I've made a few experimental stainless blades and never achieved the performance levels that are easily within reach of the forged carbon blade. Still, many approach the carbon blade with fear and are convinced that carbon blades will self-destruct when used. I ask: How could the carbon blade have played such a significant role in the development of man and be so inferior?

I've cut steak with a carbon steel blade made by Frank Richtig, famous maker of thousands of kitchen knives, outstanding hunters, combat



Fowler said the remaining blade on his grandmother's carbon steel potato peeler is about 10 percent of what it was when new, but it still does the job.

"Many are convinced that carbon blades will self-destruct."

blades for World War II GIs, and other knives, for more than 20 years. It was old and well used when I got it, and it will outlive me. I also have a knife my grandmother used as a girl. It was the first knife to cut me when I learned how to peel potatoes more than 50 years ago, and it could cut me just as well today as it did then. It will still peel potatoes with the best of them and it's more than 100 years old!

Rust No More

Many of my customers worry about rust and stain on carbon steel blades. At first, I couldn't consider their concern seriously until I took the time to examine the ways I've learned to care for my knives. My methods actually are simple procedures that I thought everyone knew.

I learned how to field dress big game at the ripe old age of 10. The man who taught me was the late Benny Carroll, of Sinclair, Wyo. Benny was raised on a ranch, guided and hunted all his life, and butchered his own meat. My family hunted with him every fall. (Being too young to legally hunt big game, I was the errand boy.)

One afternoon, someone gut-shot a buck antelope and wasn't too enthusiastic about dressing it out. Benny stated that if I wanted to learn how to dress out an animal, this was as good a time as any. I had my very own hunting knife and it was sharp, thanks to my grandfather's honing instructions.

The first thing Benny taught me was to smear some fat from the game on the blade and the animal fat would protect the blade during the work it had to do, as well as during storage after use. From that day on, the only time I wash my sheath knife is after some especially dirty job, such as an autopsy on a cow that's died from unknown causes or, before surgery on an animal, I'll dip the blade in a disinfectant—if one's available.

While hunting, fishing or for day-to-day work, it's the fat from the quarry or frying pan that protects my blade. Should a detailed analysis of the contents of the sheath of my carrying knife ever be conducted, the lab would find traces of fat from many species, including fish, prairie dog, rattlesnake, rabbit, raccoon, coyote, badger, bobcat, deer, elk, moose, bear, sheep, cow, and horse.

Now, I fully realize that readers in the medical profession may cringe at the thought of a pathogenic sheath. I believe that if the animal on which you're working is healthy and you find no evidence of disease while dressing and skinning it, there's little danger from the animal fat. If the danger were as great as the gossip in the daily news would have you believe, man never would have survived as a species.

From the time steel knives became available to man, fat as it came from the animals that fed him kept the steel he carried as good as the day it was forged. No mountain man carried oil with him because it was unnecessary and inconvenient. The fancy compounds now known as rust preventives weren't available, and the mountain men used what they had.

Those same miracles of nature are still available today. Whether you're fishing, hunting, camp-

ing or simply enjoying a home-cooked meal, all traditional care for the carbon steel blade is at your command. Just don't put it away wet!

Trapper Jake

To test my beliefs, I talked to my friend, Jake Korell. Jake trapped for more than 77 years. He also has a fur business and is one of the top taxidermists of all time (at least in my book). Jake has worn out more knives than most folks will ever own. I asked him if he liked stainless blades better than those of carbon steel. He didn't hesitate in his response: "I've used carbon steel knives for 77 years, skinned thousands of animals, and never had rust on one of my knives. They may stain but that does not hurt them a bit. You can't get much work out of a stainless steel blade."

One of the most famous knifemakers of recent times and I were discussing knives and steel. He stated that he would like to make carbon steel knives

and push the steel to the performance limit. "The only reason I use stainless," he observed, "is because my customers *don't* know how to take care of a good knife."

I believe that anyone can take care of a carbon steel blade; it's just that most people have forgotten what they knew 200 years ago. Carbon steel may stain, it may grow old while the stainless blade still looks new but, to me, the perpetual "new look" lacks personality. I still find joy in looking at what the old carbon blades have to tell me. In their age, I feel there's the story of their life: honesty, a proud heritage, and most of them still able to go some more.

Editor's note: While Fowler's methods for protecting his knives from rust have worked for him for many years, if you're considering leaving animal fat on your blades after dressing game with them, in addition to the precautions espoused in the preceding, you should also consult your physician.

"Anyone can take care of a carbon steel blade."

The Natural Approach to Knife Maintenance

From sharpening to preservation, Fowler shows you how to do it the traditional way

The care of your carbon steel knife is a simple matter. Men and women have lived with and used carbon steel knives handled in natural materials for hundreds of years. Many of the old knives are still around and as serviceable as they were the day they were made. A great many more have served man until there was nothing left of them.

Sometimes the relationship between man and knife is no bed of roses. The most significant problem to come to my attention is that many folks try to make sharpening too scientific. They purchase sharpening jigs and attempt to hone the cutting edge to too precise of a degree. It doesn't have to be that way. I seriously doubt if anyone using a knife to do the job for which it was intended, especially a hunting or camp knife, can tell the difference between an absolutely precise, exactly centered cutting edge and one that is a few degrees off. No test that I have conducted using knives in the kitchen, on the kill floor or for field work has reflected a significant difference between minor variations in the angle of the cutting edge. If you can brush your hair, you have the dexterity to sharpen a knife that will cut very well by simply using your hands and a good stone. Stop by your local flea market, pick out a couple of those old worn knives and practice your sharpening skills until you feel you have achieved excellence. Then use the knives to cut to test the results. When you feel you're ready, go to work and enjoy fine tuning your relationship with your favorite knife.

Too Coarse Or Too Fine

All too often neglected is the value of good steel. A smooth/fine-cut combination steel will



If you're using the knife in the kitchen, simply wash it and, without putting it down, rinse and dry it immediately. Any natural oil, mink oil, lanolin or almost any kind of wax also works well to guard a carbon steel blade from rust.

coach most edges back to hair-shaving efficiency without removing steel from the cutting edge. A lot of knives have been unnecessarily worn out by excessive use of abrasive sharpening media.

All too many stones and devices that are sold as knife sharpeners are either too coarse or too fine. If the sharpening device or stone you use is too coarse, your blade will develop a rough edge and drag against the material you're trying to cut. At the other extreme, hone a good blade on a thousand grit surface and it won't cut anything tougher than cigarette paper.

Many makers have determined the stone that works best to fine tune the cutting edge of the knives they sell. When you buy a handmade knife, ask the maker what stone he believes works best on that particular knife and use it. For most carbon steel blades, I find that the Norton fine India stone lubricated with kerosene is as good as any and better than most. A blade forged of carbon steel that has been heat treated to superior advantage usually will respond best to a sharpening grit somewhere between 240 and 320. You can even use sandpaper to sharpen your knives, with excellent results. Simply place the sandpaper on a hard, flat surface, such as a block of wood, and hone the edge to its finest potential. Free-hand sharpening on a stone is an easy skill to master. Simply work the blade as if you are trying to shave a postage stamp off the surface of the stone. Slightly roll the spine of the blade a little lower than necessary every third stroke or so, and you will avoid developing a secondary edge that is not as efficient as an edge that flows cleanly to the spine of the blade. With practice, you will gradually develop a skill of which you can be proud. Your skills, your devotion to the knife and the visions of the maker will join, and the knife will become a symbol of that partnership.

Rust Prevention By A Nose

I strongly feel that too much commotion has been raised about the problem of rust and very few discussions have taken place concerning the ease with which plain carbon steel knives easily can outlast their owners.

Rust prevention is a simple matter. If you are using the knife in the kitchen, simply wash it and, without putting it down, rinse and dry it immediately. This is the method used by my grandmother on her knives and I am still using one of them in my kitchen. As a cutting instrument, it is just as excellent today as it was 80 years ago. Anytime, anywhere you are using your knife, one of the best



The author said no test that he has conducted using knives in the kitchen, on the kill floor or for field work has reflected a significant difference between minor variations in the angle of the cutting edge. Here, he makes a detailed incision employing a choke-down grip with one of his knives.

all-time rust preventives known to man is as close as your nose. Simply rub your finger along the side of your nose, obtaining some of the natural human oils that are present there, and wipe the oil on the blade and the blade won't rust. If it is a big blade, you probably have a little more of that natural rust preventive behind your ear. The fat from the animals you hunt is also an excellent rust preventive.

Should you wish to use a commercial rust preventive, contact Mark Mrozek at Sentry Solutions and try the company's Tuf-Cloth. Follow the instructions that come with it and you won't be disappointed.

Many handmade knives come with handles of natural materials. While highly durable, such materials are, after all, natural, and therefore probably have natural enemies. Nature in her absolute wisdom perpetuates life by returning all she makes to dust for the nourishment of her "future crops." Wood, horn, bone, and ivory all need

protection from the effects of mold, moisture and dehydration. Tree Wax, Mink oil, bee's wax, Extra Virgin Olive Oil, and mineral oil are all excellent products to protect natural handle materials. As noted, the natural oil from the side of your nose will also work very well to keep your investment in top shape. Again, ask the man who made the knife what he recommends.

Some locations have beetles and other insects that attack natural materials. When storing your knife for long periods in such places as storage safes, it is good insurance to place a few mothballs in the immediate vicinity of the handle. If you intend to store the knife for several years in a place such as a safety deposit box, be sure and oil

**“When you buy a
handmade knife,
ask the maker
what stone he
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particular knife
and use it.”**

the handle thoroughly. Again, mink oil, lanolin or almost any kind of wax works well. Rabbi Martin Yurman, a devotee of the world of knives, told me about some fine butcher knives that were heavily coated with Vaseline, then wrapped in butcher paper. He said they came through many years of storage in an old trunk on the humid East Coast as pristine as the day they were made.

Care of your knives is an easily mastered and enjoyable skill.

It is your opportunity to build a meaningful relationship with lady knife that will be with you a long time. Don't be bashful about asking her maker about her needs and then simply share time and task with her.

How To Sharpen A Knife Anywhere, Anytime

*Always be prepared to adapt your knives to
whatever situations dictate*

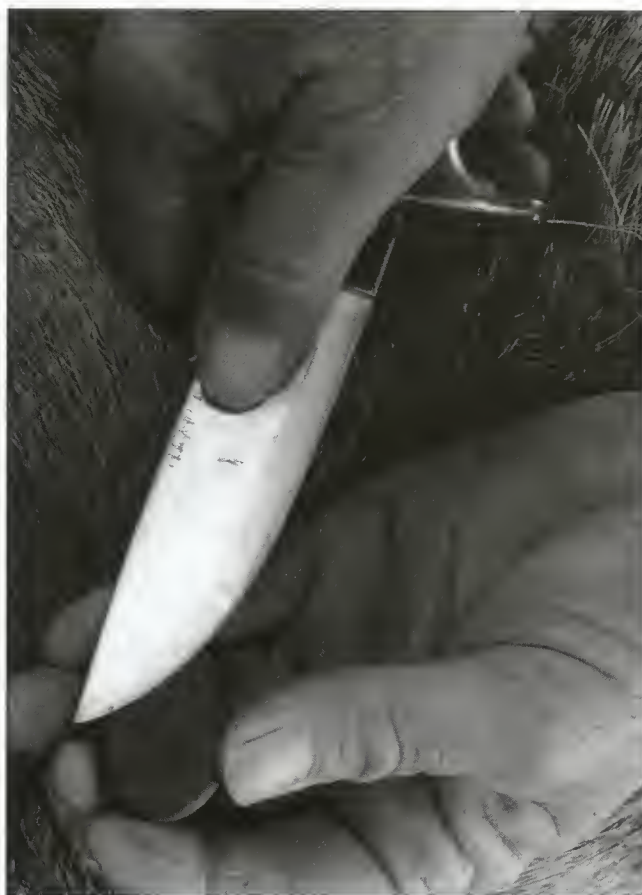
Survival is a matter of preplanning, and knives are man's most significant survival tool. With one knife, you can make anything you need to survive. Modern man and prehistoric man have made knives that have kept the human race thriving for many thousands of years, using nothing more than what was available no matter the time or the place.

Years ago, I was in one of my favorite places, the Wyoming prairie, easily 30 miles from people, electricity, and the phone—just my horse, my dog, and me.

I've always been interested in Stone Age man and have investigated his lifestyle from whatever evidence I'm lucky enough to find. Anyhow, while out on the prairie one day I noticed a rock, originally about the size of a soccer ball, on the ground with a lot of large flakes broken from it. As there was no way that could have happened without the hand of man being involved, I took some time to look the situation over. All the evidence was there: A stone had been used as a hammer and the flakes had been knapped from the mother rock. I hobbled my horse so he could graze, loosened the saddle, and took some time carefully trying to put the rock puzzle together again.

All the pieces were there except one. I started walking around the mother rock in increasingly larger circles and, within 50 feet, I found the missing flake. The sharp edge had been retouched by the original maker as evidenced by extra chips that had been knapped off to make the flake a better cutting tool, in this case, obviously, a knife. Evidently the knapper had either killed an animal or come across one ready to eat. He'd made his knife on the spot from the materials at hand, had done what needed to be done and, rather than carry the knife with him, discarded it right where he had used it. He had no need to carry a knife with him; he could make

one whenever he needed to in less time than it took me to write this paragraph. Stone Age man: competent, expedient, and at home wherever he was. Not only could he sharpen his knife anytime he needed to, he could make one wherever he was. I marked



The author dresses up an edge using the flat stone his mother-in-law found for him on Cape Cod. He says he carries the stone in his pocket at all times.



One way to always have a sharpener at hand is to cut lengths from the abrasive belts used by knifemakers. Here Fowler uses a length—with the heel of his boot—for a flat surface—for some edge touch-up.

the place in my mind and intended to return with my camera, but have never found the time. I apologize, as it would have made an excellent photo for this story.

This past summer a college friend of mine named Dennis Blankenbeckler and his wife, Karol, came to visit. As usual we talked hunting, fishing, dogs, and knives. He related an incident that happened while he was living in Alaska. He and a friend

“Use the tools you have, whatever they may be.”

were hunting big game and came across an Alaskan native who had shot a black-tail buck deer. Evidently, the man had lost his knife. After some thought, he used the best tool at his disposal. He simply pounded the brass .30-30 cartridge flat that he'd used to kill the animal, then sharpened the cartridge on a stone, making a knife good enough to dress the animal out and keep from losing the meat. His comment was that it wasn't much of a knife, but it worked.

Modern man seems to have lost much of the ingenuity that his ancestors developed as a way of life. Use the tools you have, whatever they may be.

Simple Is Best

When I was asked to write an article on how to sharpen a knife anywhere, anytime, many thoughts filled my mind as to how to relate what's simple as far as sharpening is concerned. Let me elaborate.

Progress can be a trap. When man first makes a new tool, he comes to rely on it, and all the tools that took its place for many years are soon forgotten. Knife sharpeners are an example of this kind of development.

More than 45 years ago, my grandfather gave me my first fine India stone. About 15 years ago, Wayne Goddard gave me a better one. I've used the stones exclusively to sharpen all the knives that I've made or that need honing. The stones are still going strong.



An easy way to carry pieces of an abrasive belt for edge touch-ups is in your wallet.

I love them dearly and, when they're available, I sharpen with them exclusively. However, when they *aren't* available, it's pretty easy to improvise, providing I haven't dug myself to deep a hole.

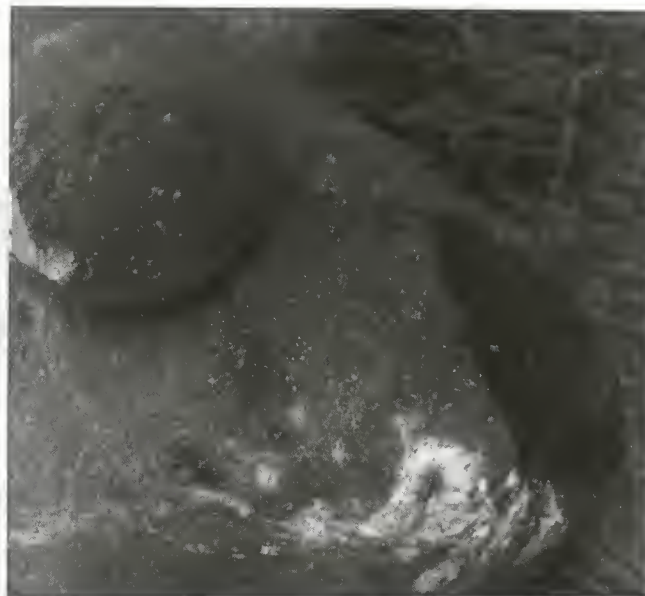
Your ability to sharpen your knife anywhere, anytime starts with planning. Your survival system must be compatible. Should you choose to carry an exceptionally hard blade, the only sharpening tool you can use will have to be exceptionally abrasive. It's pretty tough to get an edge on some blades unless you have a diamond sharpener. I avoid such blades as if they were some kind of social disease. Why?

In the first place, exceptionally hard blades are usually too brittle to count on and, without your special sharpener available when you need it, you're out of luck should the blade get excessively dull.

One of the easiest sharpeners to use and carry is a few pieces of 220-grit sandpaper. All you need is a flat surface (I've used the heel of my boot or the buttstock of my rifle on which to lay them), and you have a pretty handy knife sharpener. The blade usually only has one or two dull spots, and it isn't necessary to wear the sandpaper out working the entire edge. Just look the edge over, find the dull spot, and touch it up. Incidentally, if you want to, carry what I think is the best sandpaper currently available. Order a Norton or 3M 2-by-72-inch, 220 grit ceramic belt from one of the knifemaker supply houses and you'll have enough field knife sharpeners to last year's. Cut the belt into 6-inch lengths and each length will fit into your billfold just like a dollar bill. Water won't hurt the belt material and it will last a long time.

When it comes to stones, Norton makes a small, fine India stone. I usually have one in the glove box of my pickup. Only trouble is, it has sharp edges and corners and is pretty tough on my pockets, so it's not likely to be with me when I'm away from my old Ford. Should the folks at Norton ever decide to make a stone about the size of a stack of three quarters with smooth, rounded edges, I'd never be without it.

Usually I can find a local stone within a few yards of my work that will touch up an edge when necessary. Just for the "long-distance company" of a man (Henry Thoreau) I greatly admire, I usually carry a small flat stone in my pocket that my mother-in-law picked up for me from a beach not too distant from the one that Thoreau talked about in his essay on Cape Cod. Many times the stone's made my cutting task a little easier. I've sharpened knife edges on cement sidewalks, rusted plow lays (the rust actually increases the abrasive quality of



The fourth hit on the mother rock with a baseball-sized stone produced a flake that would serve as a usable knife.



Necessity, the mother of invention: This .30-.30 cartridge was hammered between two rocks and sharpened on a stone to produce a serviceable knife.

the surface), the frame of a truck, and with a small, diamond-coated fingernail file (I assure you this wasn't by choice). A good knife won't self-destruct when circumstances demand using something other than the newest hi-tech sharpener.

Necessity is the mother of invention. Wherever you are, there's usually something you can use to make a knife. For instance, when it comes to field dressing animals, even a glass jar or beer bottle can be made into a knife that will get the job done. All you have to do is relax, think the situation over, and use what's available.

In conclusion, I'd strongly suggest that you practice the methods I've suggested in order to fine-tune your skills before they're necessary in the field. And remember: Watch your fingertips when you use small sharpening stones. Until you get a little practice under your belt, it's pretty easy to trim some hide.

There Are No X-Rings in the World of Knives

It's important to ask the right questions to gauge performance before you buy a blade

The X-ring, or bull's-eye, is an obvious, reliable, and valid barometer for those who want to know how any firearm or cartridge will perform. This readily available indicator of execution greatly influences quality.

On the other hand, performance is difficult to gauge when it comes to knives, especially when the consumer is looking at a variety of blades at a knife show or knife shop. Firearms, especially revolvers, have come a long way in a short time simply because they're subject to immediate and obvious performance tests. The quality cannot be disguised; guns are either reliable and accurate or they aren't. Those who demand accuracy and reliability in their firearms soon learn who makes good ones,

There are some common denominators among premium knives, too. Most significant is the attitude, dedication, and ability of the maker. Just look at all the outstanding gun makers. For example, H.M. Pope stands out as one of the all time best when it comes to accuracy. For a short time, I owned one of his homemade rifles. It was one of the sweetest shooting guns I've ever had the honor of knowing.

"What was the influence that made Pope the outstanding barrel maker of his day?" The answer is that he was a target shooter who sought to make the most accurate rifle of his time and, through his competitive interest, great intelligence, and determination, he sought and found the answers.

The same principle applies in the world of blades, though many times knife enthusiasts chase

an X-ring that's not dead center. For example, rope cutting is one of the best edge-holding tests that's readily available to the individual knifemaker. Many a great race has been run simply to provide the best rope-cutting edge. Still, there's a lot more needed in a high-performance hunting knife than edge holding alone. In my opinion, an edge that's made in such a manner that it will slice rope exceptionally well but won't do much else is not the edge geometry I would want on the hunter I may have to depend on if and when the chips are down.

The steel in a hunting knife needs to be able to slice rope in top fashion. The edge on each knife must have originally passed a rope-cutting test as an indication of edge holding at some point. However, the edge I carry in the field has to be able to do a whole lot more than a thin rope slicing edge can do. The edge on the hunter needs to be balanced for maximum strength, flexible to resist chipping the first time it hits bone, and tough enough that it won't break should you need a pry bar in a hurry.

Cutting or chopping wood are tasks that many knives will be asked to do, though neither is a valid indicator of edge-holding endurance. I've cut wood with a blade that wouldn't make one slice on a piece of hemp rope. Again, the best blade design for cutting wood is not necessarily the one you want to carry when going after that trophy bull of your dreams.

In other words, unlike with guns, the X-ring in knife performance is much more complex than the geographic center of a piece of paper.

**"Many times
knife
enthusiasts
chase an
X-ring that's
not dead
center."**



Does your knife fit your hand as well as J.D. Smith's piece fits his?

Other Variables

Other significant variables in the quest for the ultimate functional knife are the individual preferences of the hand that will use it. Each man knows how he uses a blade and must seek the knife designed to complement his hand, as well as his methods.

When searching for a knife intended for use in the field, attributes such as edge geometry and

overall blade and handle shape are immediately apparent. Nonetheless, the true nature of the steel is unknown until it's been put to the test. Unfortunately, the only complete test of a knife involves destroying it in a series of torturous regimens, leaving you with the knowledge that the piece would have measured up to the most demanding task but, unfortunately, with a wreck of a knife.

Technical analysis of the steel is also usually destructive and expensive. The blade made by Rick Dunkerley analyzed in "52100 From A Metallurgist's View" in the October 1997 *BLADE* provided what Rick and I believe to be extremely valid information as to the nature of the steel. The test cost Rick two \$500 knives, one for the test and one that he traded, in typical bladesmith fashion, for the metallurgist's evaluation.

The development of this quality of knife steel took years of experimentation and elbow grease. Rick and I believed that the scientific analysis would support what we knew already due to the simple performance testing we had done. The experimenting continues and there are already indications of better blades to come.

The knowledge gained was well worth the expense, but knowledge just as valuable is available to all knifemakers by simply using the knives they make for what those blades are supposed to do.

The performance testing of knives must, by the very nature of the instrument, begin with the knifemaker. Only through his dedication can the high performance blade become available to the consumer. Makers owe it to their customers to test their blades thoroughly.

If it's a Skinner, the maker should do a lot of skinning with it, not only the easy jobs like deer and elk, but some of the tough ones like beaver, moose, and buffalo. The maker must realize and inform the consumer that the knife is intended as a Skinner and is not necessarily an optimum design for other tasks.

When designing a knife that's intended for "all-around use," makers must use the piece in relation to the all-around knife as they conceive it, and thus learn its strengths and weaknesses. This is the closest the maker can get to the "X-ring" of knife performance.

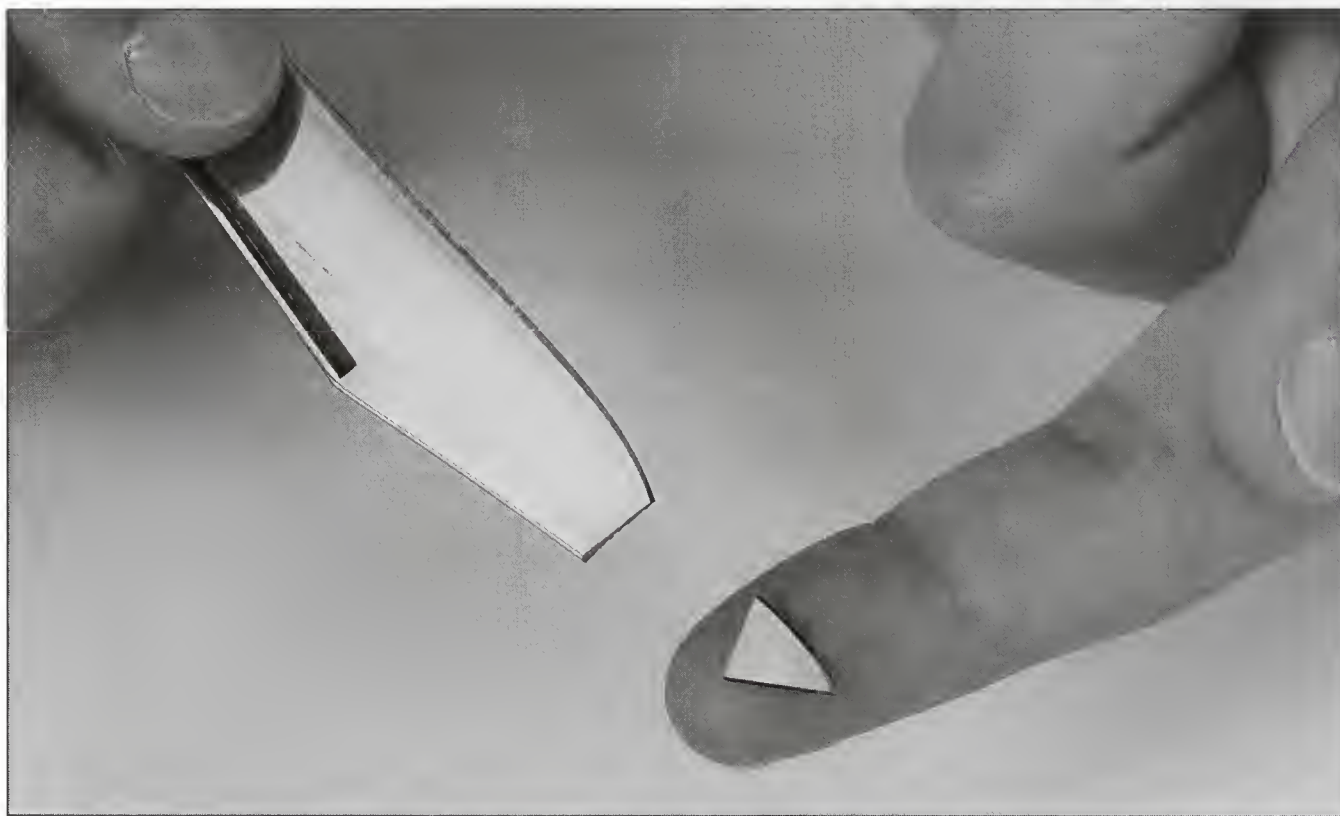
SNAP! That Dreaded Sound Means Disaster Has Occurred

The failure of an inferior blade is worse than having no blade at all

Sounds; they come in all sizes, from the clap of thunder to the sound of silence. Some are pleasant, while others interrupt well-laid plans. The loudest sounds of all are those paired with high expectations. The hollow click of a firing pin on a dead cartridge at the crucial moment of the hunt is a prime example.

To me, just as devastating is the snap of a knife blade in the middle of a task.

Many years ago, a fellow deputy sheriff and I were in the process of arresting one of the county's less-than-desirable felons, his hair-triggered proclivity for violence well known. My partner and I had a warrant for armed robbery from a distant



Using a pocketknife blade as a makeshift tension wrench, Fowler snapped off the tip when he "applied a minimum amount of torque" to it.

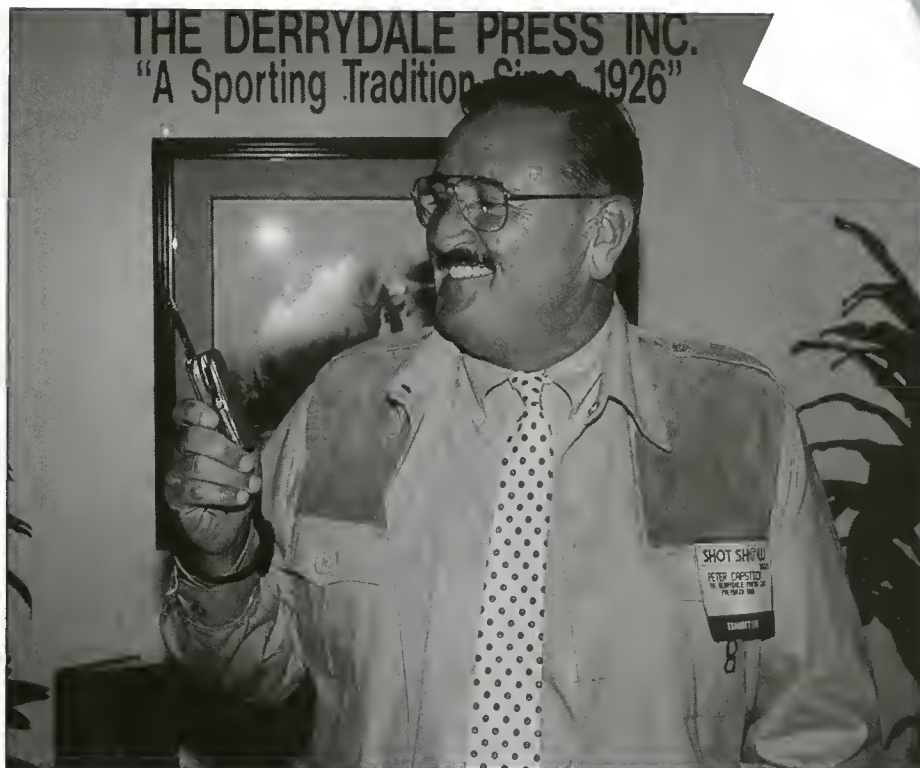
county on the suspect, though the felon was unaware of the warrant.

Earlier in the day I had contacted a neighbor of the suspect and requested that she call should he come home. That evening she telephoned, saying that the suspect had returned home, looked like he had been drinking and that he was alone. Wanting to take him alive and peacefully, if possible, my partner and I watched his house from a distance until he had time to settle down. We quietly approached his house on foot. Looking through the bedroom window, we could see him sleeping, a mostly empty bottle of wine at his side and a .45 ACP pistol on the table next to his bed.

The situation was perfect. If we could get to him while he was sound sleep, we very possibly would have the handcuffs on him before he could wake up. While my fellow officer watched the suspect through the bedroom window, I returned to the patrol car to get my lock picks so I could pick the front door lock.

Soon after reaching the car, I became concerned when I noticed that my tension wrench was missing from the leather pouch that held the picks. As very little torque is required to pick a lock, I decided to use my brand new, high-ticket pocketknife as a tension wrench on the keyway.

Opening the blade to 45 degrees, I inserted the tip into the keyway. I held the pocketknife between my index finger and thumb and applied a minimum amount of torque to the blade. The tip broke like a piece of glass and the pocketknife fell to the hollow, wooden porch floor with what could conservatively be described as one of the loudest sounds I have ever heard. I immediately stepped to the side, drew my revolver, and waited. After the echo subsided, I checked my fellow officer, who gave me the OK sign. I returned to the patrol car, rummaged



*The late Peter Hathaway Capstick wrote *Death in the Silent Places*, in which he described the Tigero, a man who hunted big cats and the spear he used to hunt them. The spear had to be tough and could not break for the hunter to keep a big cat at bay. Here is Capstick with the piece he carried—a Swiss Army knife.*

“I would like to see all tools of man rated for reliability at the time of purchase.”

through my briefcase, found my tension wrench, and returned to pick the lock. From that point on, all went as planned and the suspect awoke wearing my Peerless handcuffs.

Some might claim that my use of the pocketknife as a tension wrench was an act of heresy and abuse. I strongly believe that each knife I carry should be up to any task I may need to accomplish. To me, the knife is a tool to serve man and, if it lacks the qualities expected, it is a failure. The failure of an inferior tool is worse than having no tool at all, for you depend on it and, therefore, may not have a substitute readily available. The consequences that cascade from the use of a tool that fails may be insignificant, merely inconvenient or fatal. One day I would like to see all tools of man rated for reliability at the time of purchase; this would allow the buyer to knowledgeably select a tool of the level of quality he expects.

Big Cat Blade

The fact that many tools, in this case knives or steel blades, have had to face extreme tests of reliability for hundreds of years is manifest in literature and gives some clues as to the challenges faced by some early blacksmiths.

I just finished reading Peter Hathaway Capstick's book, *Death in the Silent Places*. In one chapter he describes a Tigero (in this case, Alexander "Sasha" Siemel, 1890–1970), a man who hunts big cats—up to 400 pounds, some even larger—with a spear. The events described occurred in the late 1800s and early 1900s when big cats were considered vermin in Africa and South America. The spears used by Tigeros were designed with a cross piece forged as a part of the base of a spear blade, in this case a 14-inch one. The cross piece functioned as a stop to keep the skewered cat from running down the spear and shredding the man who held it. Once the Tigero had the cat on the end of his spear, he could keep the animal at bay and lever the double-edge blade around in the cat to do as much damage as possible. If necessary, the Tigero would withdraw the spear and lance the cat in a more lethal location.

Imagine, if you will, the strength and toughness of a blade required to withstand the leverage needed in such an event: on one end of the spear a 170-pound man, on the other a 200-pound cat, five times as strong as the man, each of the combatants fighting to the death with all the power, skill, and adrenaline at his command. The blacksmith who made the spear had to know what he was doing. Should the spear break, the cat might suffer a lingering death later, but the Tigero would have

known the full fury of the cat and, in all probability, died almost immediately. As most of this kind of hunting was done in dense brush, tall grass, and afoot, the spear could not be too heavy, not only to conserve the strength of the Tigero, but it had to be light and balanced in order to be quick—in this case, quicker than a cat.

Modern man lives in an age where many weapons and tools are born and nurtured by high technology. No longer does man's national defenses depend on the skills of the 18th-century blacksmith. Plowshares will not be forged into missiles, aircraft or computers. People tend to look to technology and science for solutions to the challenges

they face. Technology and science do well on the technical stuff, but when it comes down to one of man's most basic and useful tools, the knife, modern man has not surpassed what the blacksmith of yesterday in many countries achieved—the knife absolutely devoted to function.

The handmade knives of today know many benefits that were unknown to the knives of yesterday. There are a large variety of

steels from which to choose, and they are better than ever. A vast degree of technical information is available at man's fingertips or the local library, a great advantage over the village blacksmith hundreds of years ago who had to discover most of his techniques solely on his own. Today, many willingly share information instantaneously with other knifemakers thousands of miles away, to the benefit of the knife itself, the skills of the individual craftsman, and the man who wants or needs the cream-of-the-crop of contemporary handmade knives. The individual bladesmith of today is limited only by his dedication, curiosity, imagination, and skill.

**“Plowshares will
not be forged
into missiles,
aircraft or
computers.”**

A Bear Blade Barely Meets the Test

Don't let inexperience and "a piece that's popular" get you in a bad situation

The time was the late 1950s. I was going to college, working at a dairy in exchange for room and board. One Saturday morning an elderly neighbor drove his pickup to the milk barn and asked if I could help him with a bear he had shot the day before. As he was both neighbor and friend, the owner of the dairy said it was OK. If I missed that afternoon's milking, he could handle it.

I picked up a jacket and my elderly neighbor/friend and I headed for the hills. As he drove, he explained that he'd been deer hunting along a deep canyon and had spotted a bear on the other side. He shot at the bear and was positive that he'd hit the animal hard. The bear then had scampered uphill into some scrub oak and my friend didn't see it come out. Due to the remote location and the time it would've taken him to get to the bear, he decided to wait until morning.

By the way, any hunter knows that an animal mortally wounded will go downhill rather than uphill. One of the absolute rules of hunting big game is whenever you approach a wounded animal or one that you believe is dead, ALWAYS approach it from the uphill side. NEVER approach it from below, as a wounded

animal will always run downhill without regard for what or who is in the way.

Anyhow, I'd seen my friend shoot on other occasions and strongly felt that the chance of him hitting a bear at anything but close range was remote at best. Being neighborly, I kept my doubts to myself and felt that it was a good day for spending some time in the hills, as well as an excuse to get away from the dairy cows for my first day off in some time.



If Fowler had his druthers, he would've had more than a penknife to dress out a 250-lb. bear.

My friend drove to the place where he'd shot at the bear. The canyon wall on our side was nearly straight up and down, a long way down! He pointed out the brush where the bear had disappeared, a patch of scrub oak about 50 acres in size. The only way into the canyon was about three miles downstream. The plan was that he would drive me to the trail leading into the canyon, then drive back to the place from where he had shot. I would walk upstream under his direction from the canyon rim, locate the bear and skin it out, preserving the claws and skull intact. I would then pack the trophy back to the trail and my friend would buy me dinner.

It was about that time that one of the hunting magazines had published an article claiming that you could always tell the tenderfoot hunters by the size of knife they carried. The larger the knife, the less experienced the hunter, or so the author claimed. I knew better but, for a lack of confidence in my beliefs, had been carrying only a small penknife for some time. There was a kind of competition among many hunters, the man with the smallest knife being the winner. I was real proud of the fact that I could dress out a deer with a small pocketknife to the amazement of some of my hunter friends, thus proving my prowess.

As I descended the trail leading to the creek at the bottom of the canyon, I began to feel a little inadequate with the insignificant pocketknife I carried. But what the heck, the distance of my friend's shot would have been more than 300 yards. He couldn't shoot that well, therefore, there probably was no bear to skin anyway. I knew that!

Going was a little tough along the creek that had made the canyon, but in several hours I was at the right place. My friend directed me to the spot where he'd last seen the bear. I began to get a little concerned when I saw bear tracks on the ground, along with blood, hair, and stomach contents, indicating a gut-shot bear. Contrary to usual wounded animal behavior, the bear seemed to have headed uphill into a tangle of scrub oak so thick that the only way I could get around in it was on my hands and knees.

I knew there was a wounded bear in that jungle of brush, and the neck muscles that make the hair on my neck stand up were beginning to ache. The more

time passed, the more I missed having my custom Smith & Wesson .45 revolver with me. I tried carrying a club but the density of the brush rendered that idea impractical.

Leaves were falling from the oak and tracking was next to impossible. After much searching I found the bear. Fortunately, he'd died the night before. He'd picked a good place to die, tangled up in scrub oak, making the next few hours as difficult as possible.

Skinnin' Time

I started skinning the bear. Again, all the blade I had with me was the dinky little penknife.

The bear wasn't large. It weighed about 250 pounds and was fat. Most folks don't like to eat bear meat. I've eaten worse but the bear's being dead as long as it had been made the decision to leave the meat an easy one. The best cookies I'd ever tasted were made with bear fat and I would've liked to have

taken some of the fat with me. However, the distance and terrain dictated tough going. And as I didn't want to carry any more than was absolutely necessary, I skinned the animal as tight as possible, leaving most of the fat on the carcass.

The little knife rapidly began to leave its impression on my hand. The spine of the blade cut into my finger while the heraldic worked on my palm. I cut a strip from

the tail of my work shirt and wrapped as much of the knife as possible to provide some relief for my hand. As I started to cut off one bear paw, I applied too much pressure and the clip blade of the penknife broke cleanly at the ricasso.

This left me with one tiny, itty-bitty pen blade about 1/2 inch long, and a little less than one-quarter of a bear to skin. I carefully continued work on the animal, taking time to sharpen the tiny blade with a river rock, hoping against hope that the blade would outlast the bear. A job that should have taken an hour kept me busy most of the afternoon.

Moonlight guided me back up the trail to the canyon rim. I'd worn out my 5 a.m. breakfast about 16 hours before the bearskin was in the pickup and my friend and I were headed for dinner.

From the time I started down the trail to the bear, I'd been debating the wisdom of itty-bitty, tiny knives as an indicator of prowess in the woods. Each man must make his own decision as to

"This left me with one tiny, itty-bitty penblade about 1/2 inch long, and a little less than one-quarter of a bear to skin."

the size of knife he carries. I've irrevocably, totally, and absolutely concluded that no matter what, I'll never consider myself properly dressed for any occasion, except those that dictate a suit and tie (I don't even own one), unless I'm carrying the largest knife I can.

I showed my friend what was left of the knife that had skinned the bear. He said, "Why didn't you say something?" I was rather reluctant to admit that I didn't figure there was a bear to skin, so I simply said that my pocketknife had been "good enough," considering my skill with it. He proceeded to show me several fixed blades he had in the pickup and one on his side. "These knives aren't much but they are a darn sight better than the one you used," he said. "Only a man bent on self abuse would try to skin a bear with something like that!"

Conclusion

As we headed home, I looked at what was left of my itty-bitty pocketknife, holding her in my

worn-out hand. I spent a little time cherishing the memories of the events we'd shared and then tossed the knife out the window. While I wish I had it to photograph for this story; one just like it will have to do. All you have to imagine is the clip blade gone and the pen much shorter and thinner to know what she looked like. I don't miss her very much. I think I learned my lesson.

At the time I was young, not too smart, and believed bad information when I should've known better. I took too much for granted, put myself in a situation that could very well have been deadly and wasn't prepared for what could have been. A lot of "ifs" didn't happen—some did. The only harm was some blisters from that itty-bitty, tiny knife, a little hunger, and a lot of fatigue. Looking back on it all, I was lucky that I had the opportunity to learn and, hopefully, not let "a knife that's popular" get me in a bad situation next time.

Chapter 2



Knife Talk Philosophy

This section, for want of a better title, addresses the environment where knife, man, woman, and community meet. An attitude or thought where there may be no absolute right or wrong. Tradition lives here, as do dreams of beauty, honor, and individual creative expression. Here are thoughts that many have known, but fail to talk about. Here lives the background in the landscape of the world of knives. It is a place of fun and sometimes a little aggravation, but all the same an essential part of the world of knives.

Spirit of the Knife

*Determining exactly what that spirit is
lies in the heart of the maker*

Some feel that abilities such as singing, acting or, in this case, making knives, come to the individual as a gift. Some talents may be gifts but they require a lot of support to develop into more than “what could have been.” When motivation for a certain endeavor is high, individuals who initially seem to possess very little talent can overcome the odds and contribute greatly to their fields of choice.

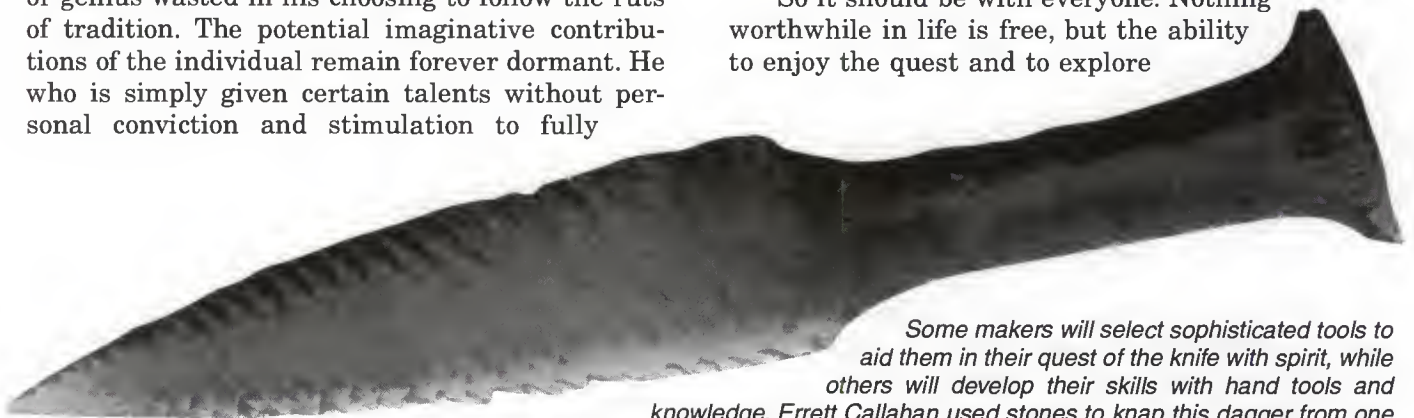
Many have heard a child's first tune on a piano, and I've seen the first knives from the hands of knife-makers. Some reveal the seed of greatness, and subtle hints of originality speak to the individual's potential contribution. If there is a gift, surely it exists blended in the nature of the individual as a talent, ability or desire to take it further. It's a talent awaiting nurture both in the form of environmental influence—family, peers, lifestyle—and opportunity, as well as from within in the form of curiosity, desire and, to some extent, intelligence.

I've seen the first knives of makers that manifest true creativity. Then, in the pieces that follow, despite that first resourceful yet crude knife, the maker's inspiration is lost to the standards of tradition or shortcuts that lead to mediocrity. The maker at one time had a gift but lost it, his talent or genius wasted in his choosing to follow the ruts of tradition. The potential imaginative contributions of the individual remain forever dormant. He who is simply given certain talents without personal conviction and stimulation to fully

develop his dream most likely will take them for granted and fail to develop his gift to full potential.

I've received several great gifts. One is good health. Another is an insatiable curiosity in some domains that interest me. The third was a very special grandmother. Her gifts were numerous. She instilled in me the gift of absolute faith and trust in Our Creator, including a love of all the experiences He provides, with a special place for the exceptionally honest beauty of nature. Grandmother had no enemies, forgave every transgression, and thus was free to enjoy a very special and complete love for all God's creations. She was extremely talented musically. She sang, played the piano and organ, and willingly taught all who wanted to learn. Her talent may have started as a gift but her ability grew throughout her life. She was a lady who believed in absolute, unshakable commitment and taught all of us who were able to listen that should we desire anything special, we had to work at it for it to be worthwhile, and that any task could and should be enjoyed. Such commitment is the essential element that makes progress and sanity possible. Setbacks or failures were actually opportunities most beneficial when we chose to consider them as a time for learning.

So it should be with everyone. Nothing worthwhile in life is free, but the ability to enjoy the quest and to explore



Some makers will select sophisticated tools to aid them in their quest of the knife with spirit, while others will develop their skills with hand tools and knowledge. Errett Callahan used stones to knap this dagger from one solid piece of emerald green glass. Overall length: 11-12 inches. (Weyer photo)



The essential element of the knife with spirit is the degree of involvement and emotion the maker devotes to its construction while always involving that special part of himself which will identify the knife as coming from his hand. This mother-of-pearl folder comes from the hand of Barry Gallagher and includes the maker's "Bug Splats" damascus blade steel. Closed length: 4 3/4 inches. (PointSeven photo)

with enthusiasm the frontiers of one's love provides an opportunity for good times.

Nickel Cigar Knife

Grandmother knew my interests were different from hers and she never tried to push me into a career in music. She was there to teach but I wasn't there to learn—at least not music.

As my interests began to grow, she encouraged me without hesitation. I gave her one of my first knives. It possessed all the grace and dignity of a nickel cigar. She praised it highly and years later requested one with a slightly thinner blade for kitchen work. Never did she have anything bad to say about that first knife. She was always using it when she knew I was about to visit. She used the knife only to encourage me.

If any gift awaits the artist, it's the reward he receives through self-satisfaction as he develops his talent, enhanced by the pleasure of sharing the emotions that surround the knife with others. When the knifemaker lives with his craft and is truly involved, his spirit lives with the knife. The object of his labor receives his full awareness. For a time, the knife and maker are one. However, when the knife is finished the maker parts with it, usually without regret.

This facet of knifemaking for some time eluded me. I felt that somehow I should hold on to the individual knives after they were finished or feel regret when they went to new homes. In some way, I felt I had to be remiss in my duty to not feel loss when my knives "left the nest." While the creations of the knifemaking craft may remain in the maker's heart for a time, for most when the knives find a new home, it's a simple fond farewell. As with my grandmother's songs, once sung they were gone, but the melody continues for those who truly listened.

Seeking to explore the emotions and thoughts surrounding my relationship with the knives I make, several thoughts come to mind. It seems that I make each knife in the faith that it will be a final resting place for my devotion. As a result, I

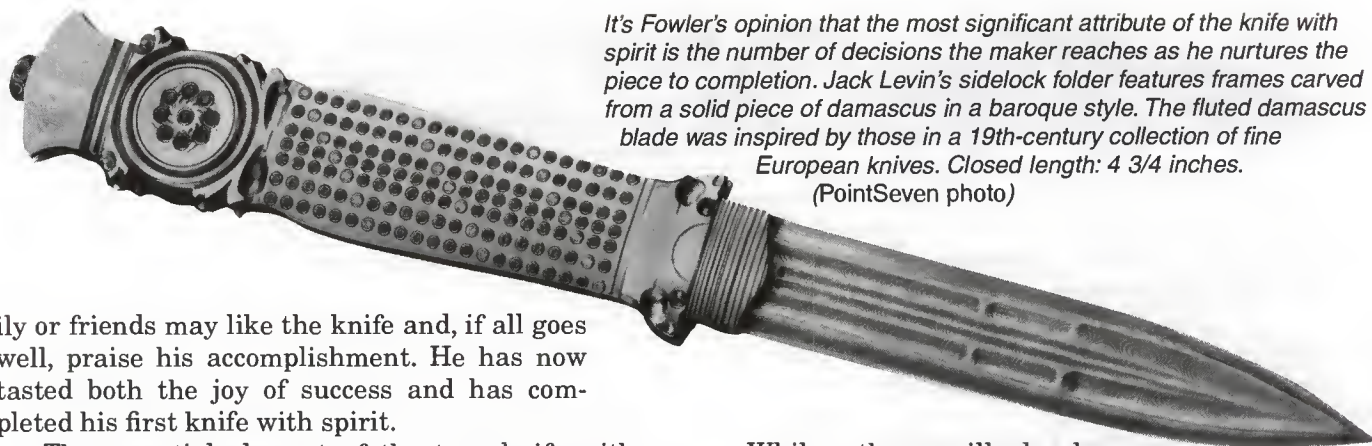
seek to instill my best ability in accord with the nature of the individual piece. When the knife is finished, my emotion moves directly to the next object of my attention. As I make knives, I seek to impart the special qualities of all previous pieces I've known into the next. Therefore, no knife I make really leaves my shop.

It's the same with each maker. As his talent grows, he'll find a time that the many subtle events he shares with the knife are of a nature that even those who are very close to him won't be able to see or hear. While he doesn't wish to keep them private, the sharing of these events known only to the maker and the knife becomes unlikely because his communication with others may be lacking. The maker can smile as his enthusiasm resides in the knife, like a time capsule awaiting the day another craftsman will hear the message he and the knife have to share. These gifts and more unite to become the true piece made by the knifemaker.

A Special Quality

For some time there has been discussion concerning what exactly is a knife made by hand. I don't wish to enter into this debate but simply want to discuss a special quality, a quality that I call spirit. The knife that manifests the spirit that somehow transcends other knives is the result of a true relationship of devotion, commitment, and respect among knifemaker, knife, and client. I feel there can be no rules to define it, no rules to delineate a specific level of quality. The answer lies in the heart of the maker.

The youth who makes that first piece reaches a few simple decisions as he starts his journey into knifemaking. At first the decisions are simple; use the metal that's available, shape it into something that cuts, put a handle on it, "and smile." It's the degree of his involvement in the knife that loudly proclaims the inclusion of the maker's spirit in the object of his attention. The knife with spirit—or spirit of the knife—is as important to him as any Loveless, Moran or Scagel. At this point in the maker's development, support is critical. His fam-



It's Fowler's opinion that the most significant attribute of the knife with spirit is the number of decisions the maker reaches as he nurtures the piece to completion. Jack Levin's sidelock folder features frames carved from a solid piece of damascus in a baroque style. The fluted damascus blade was inspired by those in a 19th-century collection of fine European knives. Closed length: 4 3/4 inches. (PointSeven photo)

ily or friends may like the knife and, if all goes well, praise his accomplishment. He has now tasted both the joy of success and has completed his first knife with spirit.

The essential element of the true knife with spirit is that it's based on a firsthand emotion received not from tradition but from the life of the maker augmented by his freedom to involve his true self in the knife. The quality of the knife depends on the degree of freedom, involvement, and emotion the maker devotes to its construction, while always involving that special part of himself which will identify the piece as coming from his hand.

Quality comes with time. For the maker who continues his journey into knifemaking, he will further develop not only his talents but will seek more knowledge as long as opportunity and curiosity encourage him to search, question, and experiment. The more he learns, the more decisions he makes while developing the knife. His decisions affect both the nature of his knives as well as their quality.

While others will develop their skills with hand tools and knowledge, the most significant attribute of the spirit of the knife is the number of decisions the maker personally reaches as he nurtures the knife to completion. The nature of the involvement is multidimensional, a blend of his total life experience combined with the opportunity to develop pieces that can be recognized as being more than just knives. Each piece is different but recognizable as coming from his hand. As with the animal species, knives made by hand and with spirit develop as if guided by some Darwinian process.

Some make knives that have both beauty and function by simply setting up a machine and, for one time only, being intimately involved with the piece. The first knife made in such a process is in

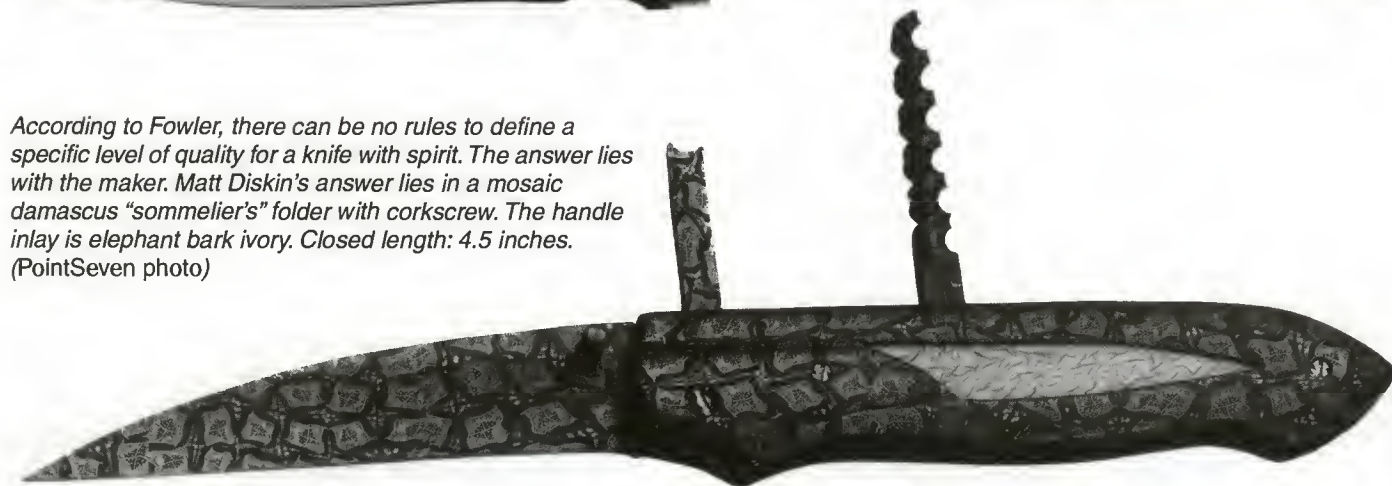
In Fowler's opinion Joe Szilaski is a true master, his dreams in steel bring top European craftsmanship to the world of knives. He is a true friend who shares thoughts on a regular basis.



When the knifemaker lives with his craft and is truly involved, Fowler writes, his spirit lives with the knife. Lloyd Pendleton's spirit has been coming through in his blades—such as his stag hunter—for almost 30 years now. (PointSeven photo)



According to Fowler, there can be no rules to define a specific level of quality for a knife with spirit. The answer lies with the maker. Matt Diskin's answer lies in a mosaic damascus "sommelier's" folder with corkscrew. The handle inlay is elephant bark ivory. Closed length: 4.5 inches. (PointSeven photo)



the spirit of being made by hand but those that follow, at least in my opinion, come into the realm of production. If the knives the maker and machine provide create emotion in those who see or use them, they qualify as art but aren't quite as special to me as the one-of-a-kind knife. Thus, in my opinion, such pieces leave the realm of being made by hand and with spirit.

Some makers may push the machines they know well to the absolute limit of their potential. There are also artists of a special nature who dance with advanced technology. They love to create a very special level of the knife with spirit. Ray and Ron Appleton are the best examples. The maker who works with his hands, knowledge, and state-of-the-art technology also reaches many individual decisions concerning the construction of the knife, most of which will be known only to him. Such artisans impart knowledge, emotion, and true love into each one-of-a-kind knife that comes from their shops. They are

deeply involved with the product of their attention throughout every moment of its development. They incorporate their own essence, blending self with material and machine to develop that gem of man called art—the unique, hi-tech knife made by hand and with spirit.

The atmosphere—which includes the total environment, steel, maker, design, and more—that surrounds the spirit of the knife made by hand reflects the degree of involvement that I believe is another and most essential aspect of such a piece. Next comes the knowledge developed in that pursuit. Finally, the harvest of all that came before is invested in one single knife. There's a great difference between the knifemakers who fashion pieces for a living as opposed to those who make knives and through them live a life many would envy. The spirit of the knife made by hand from those who choose to be a part of their product transcends the common piece made by those who somehow remain outside.

Why I Write About Knives

I'm a knifemaker and also a knife writer. While the two go together pretty well, they're not without conflict. In fact, I'm often asked, "Should a knifemaker write about knives or concentrate on knifemaking, leaving the writing to the knife writers?"

I write about blades for many reasons. Writing about them actually started as a result of making them. Potential clients wrote and asked me about knives. I had to answer their questions, and it soon became obvious that the best way to answer most of the questions was through writing a booklet. I also wanted to answer questions that don't get asked but should.

As I wrote the booklet, I became more and more involved not only in writing about knives, but also in making them. In my case, the two complemented each other to such an extent that they became one. If the old question, "Which came first, the chicken or the egg?" applies, in this instance I think it was a case of two being conceived as one.

My motives for writing about knives are many and varied. One is the obvious fact that many knife writers, as well as highly competent writers from other fields visiting the world of knives, while not lacking in interest, intelligence or good intentions, are first and foremost writers, and actually know very little about knives. They write interesting stories and take excellent photos. However, they're easily misled by the information they receive. Many misconceptions are printed, as happens in all fields, and are repeated by other writers and slowly become accepted as fact. As a knifemaker, I found myself wondering where reality was. Sometimes, the information made sense to the point that I actually thought that the recommendations the writers made were valid. However, when I tried to duplicate the recommendations in my shop or in the field, their folly became apparent.

If I, as a knifemaker who should know better, had to work the ideas over for a time before I could

One reason the author writes about knives is to discuss how well they perform. Here, Jouni Kellokoski demonstrates the performance of one of his Kellam Tommi knives. Kellam's address: 1770 Motor Parkway 2A, Dept. BL, Hauppauge, NY 11788, phone: (302) 996-3386.





Bill Burke demonstrates some of the heavy lifting that blends with creativity in the making of knives.

come to a conclusion as to their validity, where did that leave the average knife enthusiast? As Wayne Goddard so aptly stated, "There are very few islands of reality in a sea of fantasy and misconceptions."

I don't mean to condemn all knife writers. There are some writers who have been writing for some time whom I admire. They've written on a wide range of subjects, providing food for thought for many of us. Their written word has introduced many individuals to the cutlery community, and the world of knives has grown and continues to welcome many enthusiasts. I, for one, probably wouldn't be writing these words if it weren't for their contributions.

The simple fact is that I write about knives because I believe in them, the stories they tell and the part they've played in the survival and quality of man's existence. My greatest curiosity is in the performance aspects of knives. Only dependable knives that cut well hold my attention for long. Though a particular aspect of workmanship or design may capture my fancy for a time, the knife as a whole may lack any redeeming qualities as far as use.

Often I wonder why designs and materials that totally lack knife function continue to thrive. It isn't that I can't hear another artist's message. I'm many times touched when knives from times past

come to my attention when specific aspects of design speak of a special dedication from their maker. I do, however, believe that if it's a knife or pretends to be a one, it should either cut well or be labeled, "For Ornamental Purposes Only."

The Tradition Trap

I don't claim and never hope to know all there is to know about knives, function, and steel. Those who do outlive all hope for the new frontiers. Tradition is a trap; it may demand craftsmanship but only follows the faint scent of creativity. Tradition buries the soul and is the mire from which the only escape is curiosity and enthusiasm. Though tradition is at times both profitable and safe, those who live within its ruts will progress little toward new horizons. The more knowledge gained, the greater the foundations for the future.

Many times my thoughts lead me one way and tradition pulls the other. Truth is often without the safety net of tradition and leaves one alone. Still,

trying to defend tradition over what I believe to be the truth is much more costly, as the cost is my soul.

As a writer, I write about knives and dreams of knives as they come to me. With a little effort, I hope that I may be able to help bring an understanding of what knives are all about to those who read. The expectations of knives to be are much greater than the achievements that have been. Those who thirst for the knives of the future, while appreciating the dreams of the past, know the true joys the world of knives has to offer. While some will hold to the traditions of the past without understanding their nature, they cling to an empty shell and lay in the dust behind the bladesmiths of vision. The inquiring minds of the world of knives stand today upon the frontier, as I hope will all future knifemakers, providing nourishment for the dreamers and explorers of tomorrow.

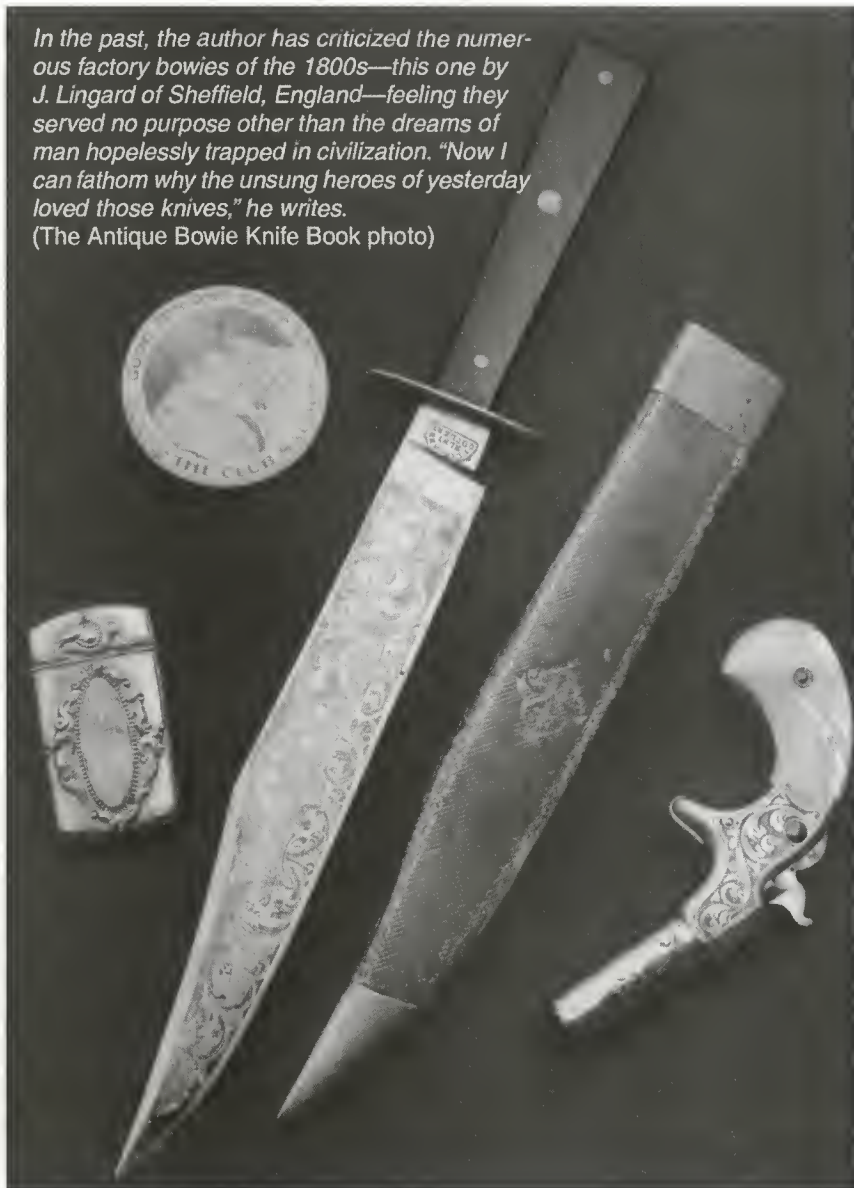
"Why do I write about knives?" Because I can't help it!

Sharp Dreams of a Frustrated Warrior

The mere thought of knives offers the author relief from today's "civilized" battles

In the past, the author has criticized the numerous factory bowies of the 1800s—this one by J. Lingard of Sheffield, England—feeling they served no purpose other than the dreams of man hopelessly trapped in civilization. "Now I can fathom why the unsung heroes of yesterday loved those knives," he writes.

(The Antique Bowie Knife Book photo)



Man fights many "civilized" battles, from those of his youth, to the streets of the city, to the riots involving thousands of people, including the personal tragedies of individuals ravaged by alcohol and drugs. When occurring on a large scale, such conflicts may be observed in the daily papers, though most are noted by only the few involved. Some of the battles challenge certain individuals, and heroes are born.

Events that afford man the opportunity to place himself in situations where his well being is at stake—and quite possibly his life or that of another—cause the adrenaline to flow. There have been many attracted to these events simply for the sake of the challenge and the experience of the dynamics themselves. Others meet the challenge simply because they must. The parallel drawn between the lives of Crazy Horse and Gen. George Armstrong Custer by author Steven Ambrose is but one example.

For the serious battles, the high-performance tools of man totally dedicated to function know a home and may spell the difference between an event that makes headlines or simply results in a moment's excitement and failure.

There are those who live with nature close up and personal who

witness flood, drought, angry, sick or hurt animals, mud, snow, freezing temperatures, and desert heat. Much of the time they're alone and must depend on their equipment to get them through the task at hand. Again, the call is issued for superior tools of man that must meet the challenge of the moment, for quality may make a difference.

There's another much greater battlefield, dignified by Henry David Thoreau as that of men who "live lives of quiet desperation," which affects many more people. On it occur the everyday events that require extreme bravery and perseverance that are rarely dignified by glory or require any technological support. These are the routine, civilized battles where an incompetent or unscrupulous lawyer, boss, co-worker or civil servant, with the stroke of a pen or unjust shake of his head, can start a cascade of events that may well jeopardize all a man or a family has spent a lifetime building. These are the daily battles of civilization where the heroes are unsung. They won't make the papers or the daily news but the participants are heroes all the same. They fight the creditors when they are swindled and cannot pay their debts. They fight the insurance companies, the traffic jams, the crowded supermarkets, the battle of the bulging waistline, and the all-night barking of the neighbor's dog.

Conflict of Little Consequence

Today, I fight one of those obscure battles of little consequence and seek comfort. The new-age computer that I'm told is logical and used with great proficiency by my neighbor's daughter who, with pacifier in mouth, sits before it and negotiates through complex programs, is a mystery to me. At least my computer doesn't make sense to me and I don't know enough about what I don't know to be able to ask meaningful questions. Where there once were words in my DOS program, now there are pictures of something much too small to be consequential or recognizable that purport to do something. When I move the mouse to one of the pictures and click the button, the computer may simply do nothing or send what I was working on somewhere else.

I would rather fight nose-to-nose to the death with an enraged grizzly than know the absolute frustration and failure I face when trying to negotiate through Windows 98. My old DOS word-processing program worked just fine. My 386 computer was my friend. I liked it. But soon, I'm told, even my latest computer won't be able to com-

municate with "the new stuff." I can't receive pictures on it and have to rely on others to keep me informed of what sometimes may be matters of true consequence.

Knives To The Rescue!

Many times I've criticized the numerous factory bowies of the 1800s and the Rambo stuff of today as trinkets, feeling they served no purpose other than the dreams of man hopelessly trapped in civilization. Today I must change my opinion, for simply looking at photos of these historical trinkets allows me to experience a few moments of tranquility as I seek to escape from the frustration of the new computer. Now I can fathom why the unsung heroes of yesterday, trapped in civilization, loved those knives. The battles they had to fight didn't require knives that cut, flexed, pried or even felt good in the hand. All those knives had to do was provide moral support and enhance the dreams of the frustrated warrior on the battlefields of legend where heroes reigned.

Civilized Battle of Steel

One of the "civilized" battles that affects knifemakers is the scale that forms on blades when it's necessary to heat them above scale temperature. I've experienced a few personal battles wrapping blades in foil to prevent carbon loss at high temperatures. Paragon Industries has introduced an argon induction unit for its ovens. It's an affordable installation that hooks up to an existing unit or can be included when ordering a new oven. It's simple to use, easy to hook up, and inexpensive to operate. The presence of an argon atmosphere assures a friendly atmosphere for blade steels at high temperatures, which sometimes is necessary when heat treating or just plain experimenting. Read the instructions and use the induction unit in a well-ventilated area. Thanks, Paragon!

Paragon's address: 2011 South Town East, Dept. BL3, Mesquite, TX 75149-1122, phone: (800) 876-4328.

What About Bob?

When one partner does not support the other's enthusiasm for a hobby or interest, something special is lost

As upstanding citizens of the world of knives, many of us have special interests and, of course, many of us love knives. If you are reading this and do not like knives, it may be because your spouse, son or daughter who does like knives read this essay and respectfully suggested that you read it as well.

Do not blame me; it is not my fault. I am only the messenger, relating incidents as they happened. Only the names have been changed in the following to protect those who need protection.

As knife lovers, we are especially fortunate when our spouses also love knives or support our enthusiasm for blades. I have been married several times and have been privileged to view the subject from both sides of the fence, as well as from the standpoint of straddling the fence. Presently, I am very fortunate that my bride shares my enthusi-

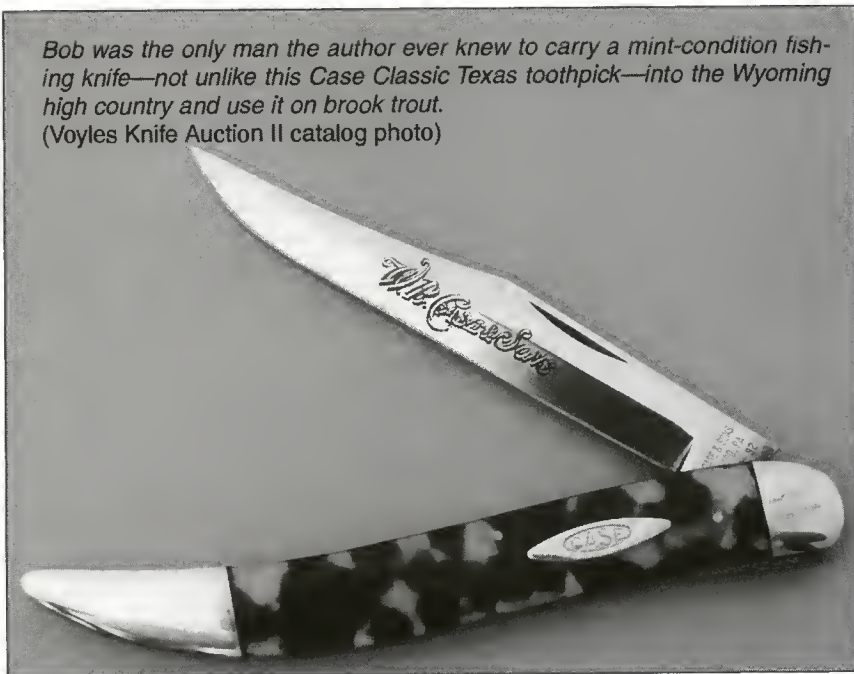
asm for knives and other interests. She does not get angry when a new book, knife or firearm shows up, and even occasionally helps me reload. I have experienced both men and ladies who ordered knives for their spouses and significant others, working an extra job to come up with the money. I feel they were the lucky ones as they unselfishly shared each other's joy.

As knife enthusiasts, sometimes it happens in our lives that our partners do not share our enthusiasm for blades or our other hobbies. I have known men who faced what mildly could be referred to as absolute and total adversity when they fell in love with a knife. At times, some of us, just by way of fate, end up with wives or mothers who have no appreciation, understanding or sympathy for the man who wants a knife—or another knife, as the case may be.

I believe that most cutlery and many citizens in the world of knives know well what it means when a man who wants to purchase a blade requests that we send no mail to his home, or leave any messages on his answering machine, concerning the knife he has ordered. Once I was even asked to simply hang up if a female answered the phone. In my files, the cards bearing the names of such men are red tagged and bear the inscription, "wife hostile." Incidentally, and fortunately, these cards are vastly outnumbered by "wife friendly" or no notation at all.

Not long after Angela and I were married, she mailed a knife to a client who anxiously had been awaiting it. Several days later, Angela received a phone call from an irate

*Bob was the only man the author ever knew to carry a mint-condition fishing knife—not unlike this Case Classic Texas toothpick—into the Wyoming high country and use it on brook trout.
(Voyles Knife Auction II catalog photo)*





An example of a partner's shared enthusiasm for a special hobby or interest is Renza Sewell (left), the No. 1 backer of her husband Logan (right) and his love of antique bowies. At center is ABS master smith Harvey Dean admiring Logan's Searles/Fitzpatrick classic at the 1999 BLADE Show.

lady wanting to know why we sent her husband a knife. The lady claimed, with emphasis, that her husband did not order the knife and knew nothing about why it came to their post office box. Fortunately, Angela caught on and stated that maybe we had made a mistake and the woman should simply return the knife. Angela thanked her for being honest and informing us of our mistake. The knife returned in two days, the package showing a little "smoke damage," though otherwise in good shape.

Good Ol' Bob

The ultimate event of a similar nature occurred recently to my friend, Bob. He was one of the finest men I ever have been privileged to know. He was also the only man I ever knew to carry a mint-condition, mother-of-pearl-handle fishing knife into the Wyoming high country and use it on brook trout.

Bob both loved and provided for his wife in style, was always good natured, and was the kind of guy you could count on to keep his word. He was absolutely dedicated to the study of knives. He knew factory and custom blades thoroughly. Bob could pick investment knives and make an honest dollar thanks to his extensive knowledge.

On the other hand, Bob's wife did not share in his love of knives. Anytime Bob showed an interest in a knife, his wife was well known for her immediate, vocal, and forceful attitude. In deference to her wishes, Bob kept his knife hobby remote from her scrutiny.

Bob had another love. His most prized single possession was his first car. He had bought it while in high school and kept it in mint running condition for over 40 years. Since his wife did not share in his love of the car, it was never allowed in the garage and he was unable to keep the paint as pristine as the other features of the car that were protected from the weather. Apparently, his wife was afraid her Mercedes would catch sticky valves or contract "paint fade" from Bob's treasure.

While an engine overhaul went unnoticed, a new paint job would have had Bob living in the doghouse for months. His car was not anything special to anybody but him and those who love old dependable vehicles that can go for untold miles without the plastic falling off. His beloved car did not have air conditioning or any of that fancy stuff; it was just something to get a guy around. His wife did not ride in his vehicle—ever.

Through the years Bob kept up with the knife market, trading blades on a regular basis and investing his earnings in a collection of some of the finest and rarest pocketknives known to the world of cutlery. To keep from upsetting his beloved bride, he kept the knives in the trunk of his automobile in several old suitcases he had customized to afford the pieces an environment where they could be well preserved.

One day fate pointed her finger and Bob died before his time. Several days after the funeral, Bob's wife called Bob's best friend, Al, and told him to come and get Bob's "piece of junk" out of their backyard. She gave Al the title and told him that Bob wanted him to have the car. She refused any payment and requested that she never see the car again.

Al drove Bob's car home and started to clean it up, planning on giving it the paint job that Bob had wanted and bringing the fine old vehicle back to the beauty she once enjoyed. As he cleaned the car, Al noted three large suitcases in the trunk. Up to that point, no one but Bob knew about the treasure chests. Friends had seen the knives but only one or two at a time. Al opened the suitcases, discovered their treasure and immediately called another friend of Bob's who was also a knife collector. As they went through the collection, they realized that Bob had done very well trading in knives.

After much consideration and discussion, they went to visit Bob's widow intending to talk knives. They were met at the door by a lady who very clearly proclaimed that she just wanted to remember Bob and not be bothered with "the rubbish" he called friends. They left.

Being honest men and true friends of Bob, they were faced with a real dilemma.

Bob was their friend.

Bob loved his wife.

Bob had never wanted her to know about his knives.

She believed that Bob had honored her request to refrain from trading in knives.

She had, what some might call, fond memories of Bob. If they told her about the knives, her memory of Bob would forever be that of a devious spouse. Thanks to Bob's other investments and estate planning, she was very well fixed and did not need the money. Bob had no children or family other than his wife. Bob had requested that the beloved car be given to his friend, Al. Obviously, Bob did not want his wife to know about the knives

but had left the solution to the situation up to Al and friends.

After much thought and consideration, the decision was made. Al and his friend sold the knives, keeping only a few special ones for themselves and to subsidize a paint job for Bob's old car. The rest of the money was donated anonymously to Bob's favorite charity.

When we share, we all benefit. I have found that true knife lovers can be trusted, and, as long as their wives, mothers or girlfriends are not hostile, we can share the good times openly. To deny another's dream only means you will not get to share the joy that dream could have been for two.

**"He was the only man I
knew to carry a mint-
condition, mother-of-pearl
fishing knife into the
Wyoming high country."**

Little Shop of Horrors

Should a knife workshop be spic-and-span or "lived in"?

By Mrs. Angie Fowler

There are moments we all remember with "crystal clarity." I find this quite interesting, as most of these "life moments" seem to meld into a large mosaic, where all the colors blend into one another, the edges no longer defined. Some moments, however, are recalled with sharpness. They may have occurred decades ago, yet they're remembered as if they happened only seconds before.

My own moments of crystal clarity have been experiences of either great pain or great pleasure. The first time I laid eyes on Ed Fowler's knives was one of the latter. *Those knives!* Though I knew abso-

lutely nothing about the "world of knives" at the time (my coworker, John McNeil, had just got me interested in knives, and I literally did not know there was such a thing as a knife show), my soul told me that Ed's show table was filled with the



Somehow, the vision of Ed making knives while Angie cleans up behind him just doesn't get it.



The ol' shovel is Ed's favorite cleaning tool.



Among the visitors to Ed's shop are his trusted Labs and an occasional lamb or three.

extraordinary. Those blades (and what I now know to be temper lines) screamed out to me. The beauty of the handles, the buttery colors of the sheep horn, each with its distinctive look, echoed from the rafters. There's *nothing* in this world like *those knives*, and that feeling continues to this day. I'm continually awed by the beauty that Ed's hands create. It mystifies me still and excites me to the bone. I still scream wow! every time I gaze at them—*every time!* Little did I know then that, one day, I'd get to live where all those knives are born.

By the way, I'd known Ed for over a year, actually. We'd written each other many times and had talked on the phone for more hours than I could count. He'd encouraged me to fly to Wyoming to see his ranch. I'd grown up on Long Island and had never been out west, and it sounded like a great adventure to me. After much encouragement, he persuaded me to visit.

At the end of 1995, after working up the courage—I never was much of a traveler, I finally decided to fly to Wyoming. (Believe it or not, after three days we were married, and the rest is history.) I got to see the very shop in which *those knives* are created. I remember the first time I laid

eyes on that shop—actually, the entire ranch gives the phrase “the land time forgot” new meaning.

Of Mice And Man

I see the shop about 50 feet from the house. It appears much smaller than I had imagined. I walk up to the shop door, open it, and peer inside. This is a “crystal moment” as I think and say out loud, “*This is where those magnificent knives are born? Incredible!*”

This is a nightmare! The confusion, the chaos, the sheep horn strewn about, the pieces of worn-out belts all over the workbench—at least what you can see of it. There are tools, bits of paper, magazines, old Wendy's hamburger wrappers, pencils, invoices from

1990, tubes of Super Glue and food—which Ed claims is only more insulation for his drafty little shop—*all over* that bench! The dust—the *mice!* (Ed encourages the mice because he says their nests are also a great source of insulation for the shop walls.) This cannot be real. The shop is more than disorderly. It seems like what's left over after a tornado blows through. This cannot be where those magnificent knives are born!

The impact of this “crystal moment” might not have been so startling had I not worked in New York hospital laboratories for 20 years. Precision, cleanliness, and order reign supreme there. To have it otherwise would spell disaster.

“The dust—the mice!”

Angie Fowler

I'm also quite orderly by nature; anything else knocks me off balance. To say the least, I had no balance left after 30 seconds in Ed's shop!

I try to regain my composure, act impressed, and hide my near disgust. It isn't easy. The most outrageous part of it all is that Ed knows where everything is! He actually

makes order out of the chaos. He encourages the mice to nest by tossing his crumbs in the corner. And the mice aren't the only visitors. He has the ever present Labradors: Buck, Bonnie and Red; Chamberlain, the cat; and an occasional calf or lamb. Last summer, there was even Bobby the Bat, who decided to live in the shop doorway for a week. All are welcome—*none* are turned away. Ed doesn't need to sweep; his footprints clear a path. He

**"Now I love the man as
much as I do those knives,
but I still can't believe
they're born in the chaos
before my eyes."**

Angie Fowler

doesn't need to straighten up because his well-being is upset by order. In all the clutter, he finds some kind of solace—and he keeps producing *those fabulous knives*.

I made the mistake—*once*—of "straightening up" for Ed. I wanted to help out and, though he never said a word, it

slowed his knife production down by one-third. I know better now and just leave him be. I realize that the shop is his world and he's agreed to leave the house to me. I'm impressed by how this quite mesmerizing man can make order from chaos and produce such consistently terrific work. I've decided not to interfere with success—but he'd better not try to set up shop in the house!

Sharpest Shop on the Prairie

Angie likes a clean shop, whereas Ed, who prefers the “lived-in” look, is allergic to “cleaning days”

By Ed Fowler

Whenever I read about another knifemaker and the story starts out about how immaculate his shop is—comments like, “you can eat off the floor” or “each machine sparkles like it’s brand new”—I get to feeling kind of guilty. I never knew exactly why I felt this way until the night I started writing this story. As with all my stories, it slowly developed while I worked in my shop, making knives. I searched the deep recesses of my mind and tried to discover the source of my guilt. I think I’ve started to unravel the answer.

While it’s impossible to recall all the events that relate to my deep-seated sources of anxiety, some come to mind.

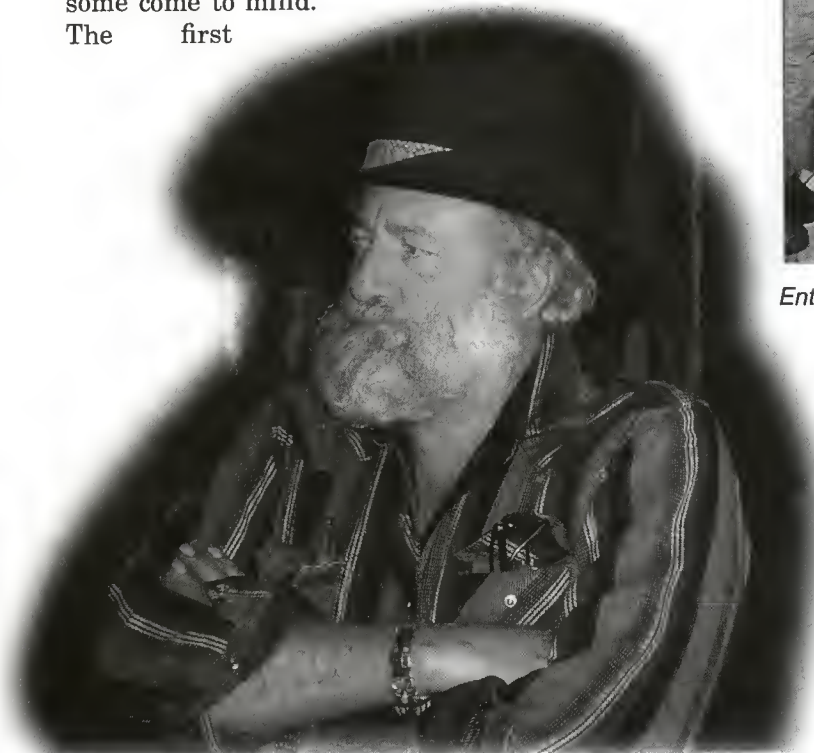
The first



Enter your own Mr. Ed joke here.

dates back to when I was about 5 years old. The city was doing some work on the street near my house. My friends and I had escaped the confines of our yards and were watching the men and equipment at work. As they moved down the street, they left behind an absolute treasure. They’d spilled some tar!

Ed Fowler takes a dim view of his wife’s efforts at cleanliness.



As the tar cooled, it was like clay. I decided to make a gingerbread man out of it. I always liked gingerbread men and hated to eat them because then they were gone! I'd hide them just to have company when I was confined to my room for some transgression. Whenever my mother found them, they got thrown out for being stale, attracting mice or being nothing but crumbs. I felt that if I made one from tar I could keep it forever, and so my project began.

I had a good friend in those days. His name was David. He and I worked on many great projects together. We were the kids with whom other mothers didn't want their kids playing.

David decided we should make a tar snowman. This seemed reasonable and we started putting one together. Trouble was, the snowman kept melting down as we made him. Realizing that the tar snowman project would have to wait for cooler weather, David and I made a tar gingerbread man. We soon found that if we kept dirt on our hands, the tar wouldn't stick too much, and it also helped keep the gingerbread man together. Had events been a little different, this could've been the beginning of two of the greatest sculptures the world had ever known—pure art from the unadulterated minds of creative geniuses!

We would've been OK but, before we knew it, time had slipped away and we could hear our mothers' voices calling from the real world. Anxiously we ran to their call, not as fast as we could have due to the increased size and weight of our shoes and clothing as a result of all the caked-on tar. I can still see the excitement in my mother's eyes when I showed her the tar gingerbread man that would never get stale, attract mice or break into crumbs. She looked kind of like my cat when my dog was too close to the kittens.

I tried to explain but her voice was much louder than mine. One thing good about the deal was that she didn't touch me. She just gave orders about taking off my clothes and putting them in the garbage can. I hid the tar gingerbread man on the back porch while she was looking for something to remove the tar from my skin, which was the inspiration for an event to be discussed over and over again for years to come.

Smell Of Success

On the basis of the aforementioned incident and several hundred similar ones that occurred

later in my life, I've come to realize that I'm the type to become totally immersed in my work. The surroundings matter very little. The smell of a decaying buck sheep's head goes completely unnoticed when I see the beauty in the sheep horn that adorns the skull.

Knifemaker Ray Appleton came to my shop once. Upon entering, his comment still charms my ears: "Nice shop; my kind of place for making knives." We worked on several projects, then needed the contribution of a specialized machine. We visited a machine shop that sparkled. Ray's observation: "Come on. We can't work in a place like this." My sentiments exactly. There are places to work and there are places to keep clean. I have to admit there are times it gets so cluttered in my shop that there isn't room for the dogs, cat, and me, and some-

thing has to be done. However, the whole time I'm picking things up, my mind is a long way off, working on the knife that will come when the picking up is done. A vacuum cleaner always sounds angry to me, and I'm uncomfortable in shops that sparkle.

My shop is not immaculate. While I could eat off the floor, most folks wouldn't. I have mice, dogs, and a cat for company most of the time. They don't complain about the shape of my shop and we're all

more than comfortable. My power hammers are covered with 20-years accumulation of grease. The walls have never been washed or painted, as many important phone numbers and messages are written on them and are where they need to be. When the floor gets cleaned, it's with a scoop shovel. My shop broom is 20 years old and has another 20 years left in it. This isn't something of which I'm proud, nor do I apologize for its condition. My shop is for making knives, pulling porcupine quills out of dogs, warming up newborn calves that get chilled down, skinning out a deer, or whatever else we decide to do there.

The thought that a clean shop speaks to the quality of knives made therein is like judging the accuracy of a rifle by the condition of its stock. They may or may not go together.

My shop is my world. It's where I work, where I dream, where I seek the knife that will be made tomorrow, the place wherein all the sheep horn, ball bearings, tools, and machines from the past and I come together looking toward the future.

**A vacuum
cleaner always
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In Search of the Real World of Knives

The unsung heroes of the real world of knives are the foot soldiers who support the army of knifemakers

By Angie Fowler

This “world of knives” is filled with such interesting folks. There are genius-quality people making the best knives ever. It always awes me how there are more and more folks wanting to learn the craft—and not just men, anymore—and there is just so much to do!

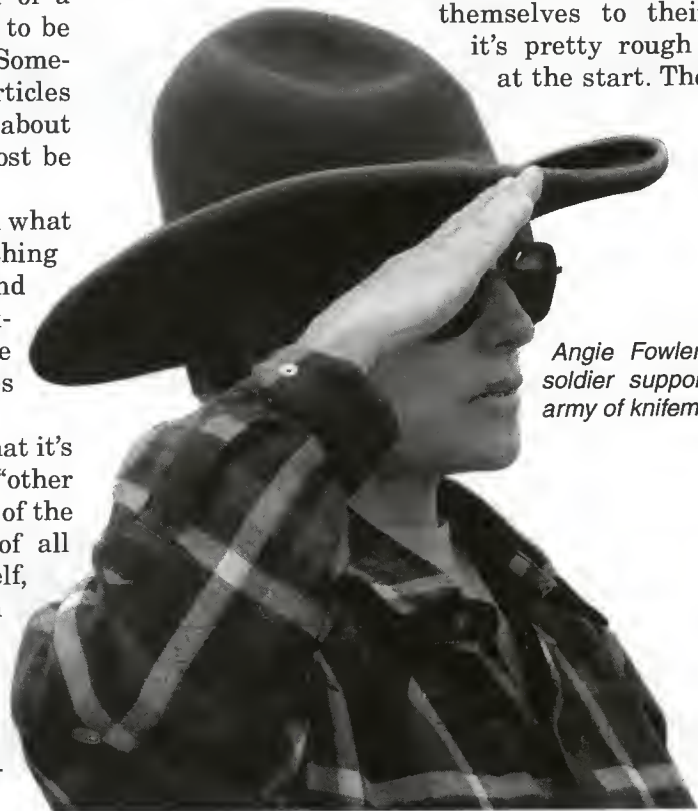
I’m very lucky to be married to one of those creative geniuses—Ed Fowler—the lover of 52100 ball-bearing steel, sheep horn, and dedication to the functional knife. Ed is about as much of a genius as you can get. Sometimes he seems to be somewhere else—not even on the planet! “Somewhere out there” is where all his great articles come together, and where all those ideas about improving his knives germinate. It can almost be too spooky to be around.

I don’t know if you folks can identify with what I’m trying to say here. Creativity is something very special, and artists are very special—and you know what else? The folks in the background behind these very special artists are very special, too. They are the unsung heroes of the world of knives.

I don’t want to offend anyone but I feel that it’s time that some light shines on all the “other heroes” of this great world of knives. I speak of the significant others, the wives, the friends of all these creative knifemakers, yes, even myself, Ed’s “present wife” and oftentimes “pain in the ____”—especially when I do *not* agree with something that the highly creative knifemaker is attempting to do concerning his craft. We unsung heroes are in the background, sometimes never even seen or recog-

nized in public. We are the ones who quietly promote the knifemaker/genius. How? By answering the mail; bringing in another income; paying medical insurance; helping with bills; keeping the books; reminding the awesome knifemaker exactly who it is that he’s speaking to when his memory fails him; keeping track of all the records; making sure the money is in a safe place at the shows; trying to stabilize his environment so he can continue with all his creativity; etc., etc., etc.!

Think about it for a minute; when these knifemaking folks decide to dedicate themselves to their art, it’s pretty rough going at the start. They can



Angie Fowler: a foot soldier supporting the army of knifemakers.

be like the starving artists in the movies. It takes awhile to establish themselves, especially if they don't have the ultimate benefit of having some "big name" to help them. Yes, you admire them, but you also must admire the unsung heroes behind the scenes who keep the household going in the lean times.

We unsung heroes are the ones who get the new ideas bounced off us; who have to understand when the "art" comes first; who have to appreciate the "artistic temperament"; who have to hold down the 9-to-5 jobs; who have to accept the fact that the phone will ring night and day; and that the customer *does* come first.

I once made the dumb comment to Ed that after all this time setting all his own hours I thought he would have a difficult time holding down a *real job*—hence, this article. Now, for what I *meant*: In the sometimes boring "real world," we unsung heroes have to live our lives by the clock. Just having to be *at work* at an exact time takes some discipline, after all. We unsung heroes have to answer to someone else. That's reality. Lots of

folks have to do it. What many folks tend to overlook is that there's a beauty in that discipline, too! We unsung heroes are *not* necessarily the boring ones at all. We are the soldiers. May I also be so bold as to say that without the soldiers, there would be no army of knifemakers!

The payoff for the unsung heroes is that we enable those creative geniuses to blossom. We help those folks do what they love so very much—make knives. We get to see what their hands can make, and we know that we are partly responsible, though perhaps not nearly as creative.

So ... when all you great folks go to those great knife shows and handle all those great knives, *please* remember that somewhere there's someone in the background helping that creative genius you're talking to produce his art. We may not be as creative, but we are very necessary.

To all you unsung heroes—salute!

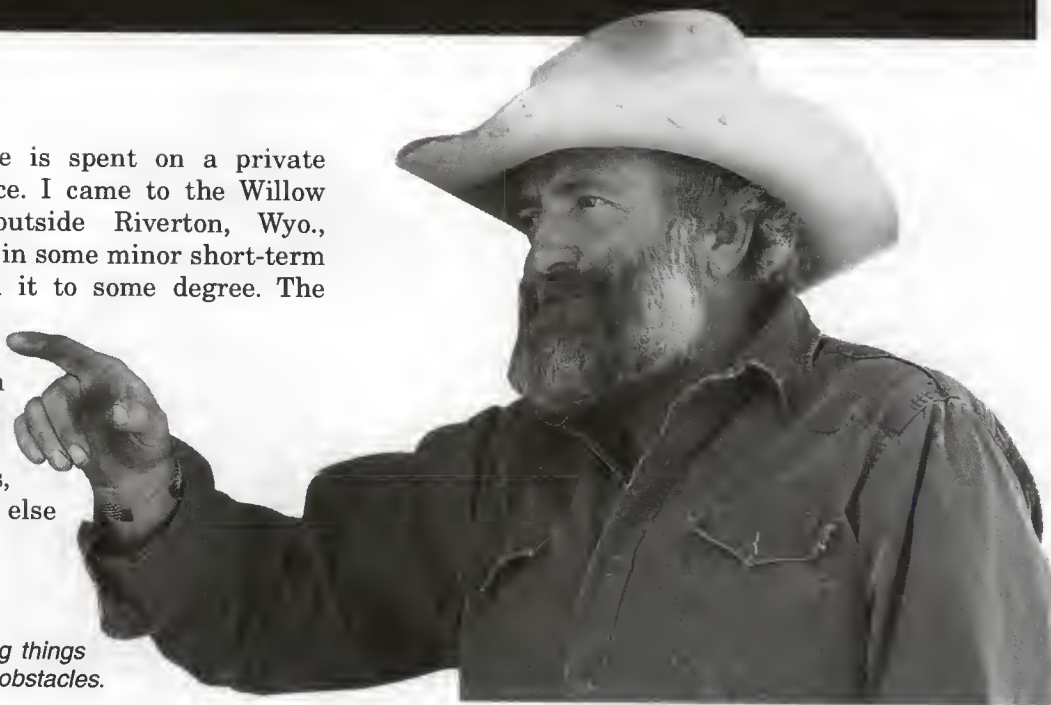
In her "real life," Angela Rapone Fowler is a medical technologist at Riverton Memorial Hospital in Riverton, Wyo.

The author's visions and the desires of his clients dictate his real world of knives

By Ed Fowler

Most of my time is spent on a private island: my place. I came to the Willow Bow Ranch outside Riverton, Wyo., nearly 30 years ago and, in some minor short-term ways, may have shaped it to some degree. The impression the Willow Bow Ranch has made on me, however, is much more significant. It is a land of knives, dogs, horses, cattle, crops, books, and whatever else nature or I feel is appropriate.

Ed Fowler: a knifemaker doing things of consequence with the least obstacles.



“Sometimes, by fate, I’m forced by circumstances beyond my control to enter into ‘the real world.’”

Most of the time, I remain contentedly isolated from what my bride, Angie, refers to as “the real world.” I haven’t taken the time to watch, read or hear a newscast since what’s-his-name made his second campaign speech for president more than eight years ago. I must concede that much of my freedom is possible through my bride’s devotion to the stuff I don’t do well.

Sometimes, by fate, I’m forced by circumstances beyond my control to enter into “the real world.” The cognitive process that laid the foundation for this discussion started while—thanks to a kidney stone—I was filling out admission forms at a local hospital. When I came to the “name of employer,” I wrote “none.” The lady at the admissions desk asked me if I had a job. I said, “No, I don’t have a job.” Angie immediately changed my answer, stating I was “self-employed.” The thoughts that follow have accompanied me while irrigating the fields, branding calves, and fooling around with knives.

I find something lacking in what comes along with a sure paycheck or what my “present wife” calls “a real job.” I can only remember having one “real job” in my life. As a youth, I worked for a husband-and-wife team who constantly fought and

kept me in the middle—always. One afternoon I quit without even going back for what would have been my first paycheck. It’s not that I haven’t been employed; I’ve received many paychecks since that time, but only for doing what I would have gladly done for free anyway, and felt pretty fortunate that some folks were willing to pay me for “just being me.” My life habit has been that when what I’m doing becomes a job, I simply leave and find another place.

The past 20 years our crops have been planted, fertilized, irrigated, and harvested on time, and always have provided high yields. Last year we

Ed, here at work in his shop with his good friends on the Willow Bow Ranch, says “his place” in the real world of knives is a land of knives, dogs, horses, cattle, crops, books, and whatever else nature or he feels is appropriate.



“I find something lacking in what comes along with what my ‘present wife’ calls ‘a real job’”

weaned a 97 percent calf crop and sold the calves to our advantage at the right time of the market.

Throughout the greater part of my life, I’ve devoted my leisure time to the study of the knife as a tool of man. I’ve done my best to investigate and promote the development of the forged blade, and hope that I’ve been able to influence the world of knives in such a manner that some of the blades being made today are a little better than those made during the past 300 years or so.

I feel very fortunate to have the world of knives included as a highly significant part of “my place.” In the world of knives, I’m free. Time travel is available through a single knife made hundreds of years ago—or yesterday. When I share a few hours with an old knife, I’m instantly transported back in time as my thoughts mingle with the creativity of the man who made her. I don’t need to travel great distances, for, in a way, my “destinations” come to me; all I have to do is see and hear the message they bear. As the message blends with my thoughts, all is complete. I find no desire to be any other place, for I can achieve a complete and honest peace of mind here, my place, be it at the forge, sharing time with a piece of sheep horn, a tree, blade of grass, or a coyote making his rounds.

Unlike those unfortunate folks who have real jobs, I never have weekends off. On the other hand, when someone tells me “have a nice weekend,” it’s kind of a wake-up call to be grateful that I haven’t had to watch the calendar or clock.

My watch rarely, if ever, is close to the correct time. I never know the correct date and sometimes have to wonder what month it is. I don’t come home after work, put my feet up, and turn on the TV. I don’t get a paid vacation or have to worry about accrued sick time. If I don’t work, I don’t get paid, and someone else must do what needs doing in my place. I go to my tasks when they need attention, be it a cow in trouble having a calf at 3 a.m., or irrigating at first light or the last light of day. Nature dictates my workday on the ranch. I enjoy working with her for she is an honest partner. We share time and every moment is filled with the art of living. When I fail to heed her call, a calf may



As notes Angie Fowler—here at husband Ed’s side at a past BLADE Show West—“when all of you great folks go to those great knife shows and handle all of those great knives, please remember that somewhere there’s someone in the background helping that creative genius you’re talking to produce his art.”

“I don’t need to travel great distances, for, in a way, my ‘destinations’ come to me.”

die, or the crop may be short for lack of water. I’m reminded of my failure by the mournful call of a cow for her departed calf, or as I walk past plants that have suffered for lack of nourishment.

My visions and the desires of my clients dictate the nature of my knifemaking time. *BLADE*® does provide me with a deadline, and sometimes I’m late or early, but never derelict. I’ve never taken a vacation that didn’t further my knowledge, or read a book that didn’t give me some thoughts to share with *BLADE* readers. To me at least, the real world is what we awake from, when and if we seek or accept the true frontier that quietly awaits our attention.

I guess the best way to put it: Being unemployed allows me to do the things that I feel are of consequence with the least obstacles.

Last Scratch Fever

The driving force for knifemakers can be almost too small for the untrained eye to see

I've been fooling with knives for more than 50 years. Most of that time I've been vaguely aware of a single driving force common to all knifemakers, one that pushes them to the limits of their talents. I've searched for this common aspect in all cultures of the world of knives, examining

each maker's product in anticipation of discovery, only to be disappointed time and time again.

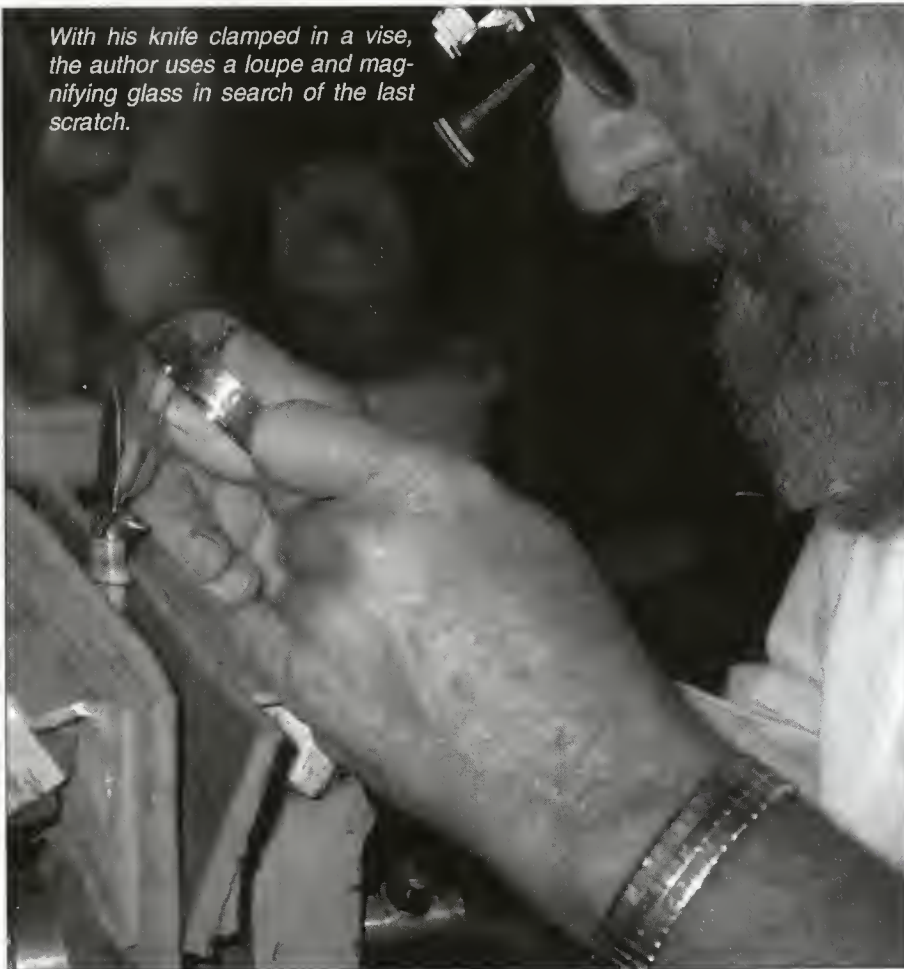
Could the driving force be that the knife is man's most essential tool, providing him with food and other tools since his creation, which has in turn instilled in him the innate need to make knives? Such an explanation, while seemingly plausible, still doesn't reveal why all men aren't obsessed with knifemaking, nor explain why many makers are into knives that serve only the dreams of man.

Could the driving force be the obsession with design or materials from which some knifemakers seem to have no hope of escape? No. Again, many knifemakers only see design and materials as a means to an end, the end being a knife that they like.

Could the driving force be that makers are compelled to build knives simply to escape the boredom of television or the 40-hour work week? Again, most makers put in many more than 40 hours a week working on knives. Most of their lives (or at least mine) are spent alone with dogs or cats or mice for company, and still they seek more time in the shop.

Finally, after years of searching for an answer, I feel that I've discovered the driving

With his knife clamped in a vise, the author uses a loupe and magnifying glass in search of the last scratch.



“In the Fowler dictionary of knife talk, this is known as ‘The Syndrome of the Last Scratch.’”

force common to all knifemakers of all time and all cultures, as well as the many craftsmen who have graced mankind since time began. The answer was there right in front of my eyes, from the first knife I ever made to the last one I worked on today. It's obvious and well known to all. My revelation?

The Constant Challenge

The one aspect of knives and knifemakers that's known to everyone in the trade, that driving force which plagues them constantly and pushes them to the upper limits of their abilities, is a constant challenge from making the first knife to making the last.

All knifemakers know it well. When they made that first knife, it was more significant then. As they progress in ability and their eyes become more talented, they still find that, while smaller in size, it's even more challenging and, as its size diminishes, the motivation to remove it becomes even more demanding.

What is it? Simple! It's the last scratch! When each maker made that first knife, the last scratch was probably so big that you could lose a dime in it. Then, as each maker progresses, the last scratch becomes harder and harder to see and, while the last scratch gets smaller, the motivation (obsession) to remove it becomes greater.

For the bladesmith, it starts with the deepest hammer mark to be ground out of the blade. As the smith works the blade down, it's the last 36-grit scratch, then the last 60-grit scratch, and on down to the last 1,000-grit scratch that drives the smith to perfection.

When it comes to finishing the knife, that last scratch keeps the smith devoted to the knife for hours. How simple the lives of bladesmiths would be if they weren't tied to that last scratch.



The author said most of his life is spent alone in his shop with dogs, cats or mice for company, yet he continues to seek more time there.

The last scratch doesn't even have to be a scratch. It's the search for the best that the last scratch demands that's so important.

The “\$100 Knife”

One time not long ago, I decided that I'd like to make a simple knife that I could sell for \$100 or less. I started to grind a blade from flat stock, but decided that I couldn't be content with any blade that wasn't forged.

I fired up the forge and put some flat stock in it to heat up. Then I decided that if I were going to forge a blade, it had to be 52100 from a ball bearing.

I put a bearing in to heat up and, as I forged it, I tried to decide on an easy blade that wouldn't take long to forge. Well, there wasn't any sense in not making the blade as good as I could, so I put more time into its construction.

I figured that I could make up the lost time by shortening the heat-treating process. Still, I didn't feel that would be appropriate. Therefore, I kept



On his "\$100 knife," Fowler figured that he could make up lost time by shortening the heat-treating process. However, he didn't feel that would be appropriate, so he kept the heat-treating time the same as for his standard knives.

the heat-treating time the same as for my standard knives. What the heck, I thought, I could make up the time and not finish the blade like I usually do.

As I tried to find a place to quit sanding the blade, again I was caught by that last scratch. The blade ended up with a mirror polish. Since it was polished, I might as well go ahead and etch it. I could make up the time lost with a simple handle.

When it came time for the simple handle, I was just going to fit up a piece of wood from an old

"It starts with the deepest hammer mark."

shovel handle and epoxy it to the blade. Still, it wouldn't be as well-fitted without the benefit of a cap between the blade and the handle to keep out moisture. I started to fit a simple cap out of an old strip of copper, then decided that since I'd come this far, I might as well go ahead and fit a brass guard on the tang and merely affix it with Super Glue. Again, since the guard was fitted so well, I might as well go ahead and silver solder it to the blade. By this time, the knife was too nice for the old shovel handle, so a sheep-horn handle it had to be!

You probably have figured it out by now. The \$100 knife became a \$300 knife on which I probably lost money trying to make it cheaper.

In the Fowler dictionary of knife talk, this is known as "The Syndrome Of The Last Scratch." It starts ever so simple, one big scratch, followed by

smaller and smaller scratches that become much more significant than that first, big, last scratch. Soon the individual is trapped and becomes a knifemaker or craftsman, not by virtue of any altruistic motivation, but simply because of that last scratch, forever caught by the last scratch syndrome. Knifemakers are driven to high levels of achievement by something of which they want to rid themselves: the last scratch!

The Sheep-Horn Sherky Shuffle

His knife handle of choice takes the author on an adventure only he could have

Making knife handles out of sheep horn has introduced me to many folks and situations that have been interesting, to say the least. Natural materials come from Mother Nature and, while she has her laws, when man gets into the equation, all kinds of things happen.

When I first started ranching, the Riverton Livestock sale barn used to do business in a lot of old horned buck sheep. Some nights hundreds of the aged bucks came through the sale ring. I always was amazed by the majesty and beauty of the horns the old bucks carried on their heads. There aren't many folks north of the border who care to eat the sheep, so most of the animals end up in Texas, then across the border into Mexico. In the early days an old buck would sell pretty cheap, especially one that was obviously on his last legs and unable to make the trip to Mexico.

I decided to try making something out of the horns and bought a few of the animals. As I learned more about them and the knives I made were getting easier to sell, I bought more sheep. The ranchers watched me buy the old bucks and, as most of the ranchers didn't know me, stories started to circulate as to my need of the critters. Some said I ate them; others just thought I was kind of eccentric.

One afternoon in the sale barn I was sitting next to an older gentleman. We were talking cows and sheep as the animals came through the ring. An aged, dying buck plodded in and I bought him for the grand sum of \$1. The man asked what in the heck I was going to do with the old buck. I showed him a knife and told him that I made knives and used the horns for handles. He said, "Heck, I go to lots of sales and can pick some up for you."

I figured it wouldn't hurt to have a few extra sheep and explained that I wanted old, sick, and dying bucks with good horns for as little cash as possible, and I would chip in for gas to help him bring them to Riverton.

About a month later, I got an early call from the sale barn. They said that they were unloading some bucks for me. It was an exceptionally cold, snowy morning with the thermometer at minus-35 F. I put the stock racks on my pickup and headed for the sale barn, figuring on three or four old bucks. As I drove into the lot, all I saw was a semi backed up to the ramp. I started to get kind of suspicious. Looking close, I saw that they were unloading sheep. Looking a little closer, my fears were confirmed. The animals were old horned buck sheep. I later learned that the man I had been talking to was one of the



biggest-order buyers around when it comes to sheep. A few to him meant less than a thousand.

The driver was apologetic as many of the bucks had died on the trip, but he said his insurance would cover them. My bill still came to about \$400 more than I had in the bank. This was one time in my life that I was very thankful for a blizzard!

I told him to just pile the dead ones up in the corner of the parking lot and I would haul them away for him. He was grateful and I was thankful. I thought about trading him the dead ones for the live ones, but he probably wouldn't have gone for that.

It took me most of the day hauling the live bucks home seven at a time in my pickup. I hired a kid to help me load the dead ones, and we piled them up in a far corner of the ranch for the coyotes and whatever else would eat them, figuring to pick the horns up in the spring. I had enough sheep horn to last years.

Deep In Sheep

The live bucks presented a different kind of opportunity. I knew of no way to take the horns off a live buck without fatal consequences. While I was trying to find a way to use the meat after slaughtering them for their horns, the ones awaiting a final destination continued to eat hay--lots of hay.

My part-time hired hand refused to enter the corral, a lesson he'd learned when he was a kid. His folks had raised lots of sheep and he had the pleasure of graining the bucks. Walk into a pen of old bucks with a bucket of grain and they get pretty competitive for their share, and things can get interesting. A little kid walking through a bunch of

**“Some said I ate
them; others
thought I was
kind of eccentric.”**

bucks with a bucket of grain learns a lot about broken-field running. I tried to find a way to eat the meat, as it was getting more expensive to feed the sheep all the time. Meanwhile, their value in the sale barn had hit rock bottom. Old buck sheep have a very distinctive flavor, kind of

like liver to those who don't like liver, only a little more intense. I hated to waste the meat, so I tried about every recipe imaginable in hopes of eating it.

I found several interesting facts. First, I tried to blend the buck sheep meat with beef to stretch the beef a little further. The result of this experiment was the discovery that one teaspoon of sheep meat mixed with 10 pounds of hamburger rendered the total completely unpalatable.

One day, my grandmother gave me a recipe for sausage that looked like it might be the answer. Since a good friend had a slaughterhouse, walk-in smoker, blenders, and a grinder, we gave it a try. This proved very successful. Our sheep jerky sausage became extremely popular and was sold and given away for Christmas presents. The demand became overwhelming and we soon had orders for hundreds of pounds of “sherky.” We decided to go into the sheep-sausage jerky business, fully convinced that we would not only become rich, but I would be able to obtain sheep horn for knife handles virtually free.

We then entered the real world. Going into production with food for human consumption involves more bureaucrats and rules than my corral has flies. The result? The great sherky business became a memory.



Some of the old bucks whose horns may one day comprise the handle of an Ed Fowler knife, such as on his multiple-quenched Pronghorn model, reside in Ed's corral.

How To Make Friends and Influence People, Sheep-Horn Style

The author uses his favorite handle material to repay an old debt

As the quality of my knives improves, my need for sheep horn for the handles increases. Word gets around that I'm interested in buying sheep horn. It doesn't take long for most everyone who raises sheep in my area to learn that I'm a ready market for dead and dying horned bucks. As a result, folks call whenever they have a dead or dying buck with good horns.

The wintertime phone calls aren't so bad but summertime calls are another story. They usually go along the lines of, "I have a set of

**"When it comes to
sheep horn,
no hardship
is too great."**

horns for you. One of my best old bucks died last night." I get directions and head out, not wanting to waste too much time, as dead bucks decompose quickly in the summer heat. Usually the callers are pretty accurate but sometimes they miss a little on pinpointing the day the buck actually died.

One time in particular, a 300-pound buck had been putrefying in the searing heat for about a week. His horns were exceptional, so I decided to load him in the pickup, flies, maggots, smell, and all. It was enough to make



The author's sheep horn knife and sheath rest on a choice piece of sheep horn.



If you own an Ed Fowler knife today, the horn handle may have come from among these old bucks on his Willow Bow Ranch.

your eyes water but, when it comes to sheep horn, no hardship is too great. We headed for home, the people driving behind us always staying well behind, those going the other direction always looking back at us due to the overwhelming smell of the dead buck.

Gas Wars

As we drove toward town, the buck reminded me of a run-in I'd had at one of the local grocery stores. I'd bought some canned sauce from one of them and when I opened the can, quite a bit of air pressure escaped, the gas not unlike that coming from the buck sheep in the back of my pickup. I'd gone to the manager and asked for a replacement can of sauce and he'd declined, saying it was impossible for one to go bad. I told him that I'd buy my groceries elsewhere and hadn't been back in the store for years.

I suddenly decided that it would be a good day to "make friends" with the manager. I parked my pickup, buck sheep in back, as close to the front door as possible, and walked into the store.

"Pretty soon the store was virtually empty of customers."

It was kind of nice being back in the old establishment, air conditioning and all. There were a lot of people shopping. Strolling up and down the aisles, I found some things that looked kind of good, then decided I didn't need them and put them back on the shelf.

Pretty soon the store was virtually empty of customers and one of the checkers was walking around with some kind of spray can making the place smell like pine trees. The manager came up to me walking fast. I could see that he remembered the last time we spoke.

He asked if he could help me find what I wanted. I told him that I was looking for some of that "special sauce." He grabbed the front of the cart I was pushing, led me to the place where the sauce was, and tossed in a couple-dozen cans. I informed him that was more than I could afford; he said that it was on him, that I shouldn't even bother stopping at the checkout. Just get my pickup out of his lot!

Sometimes, sheep horn can make friends, and make folks more agreeable.

Dear New Knifemaker

An open letter to today's up-and-coming cutlers gets the rookies off to a good start

Recently, I received the kind of phone call I like to get. The caller wanted to learn how to make knives!

He'd held many jobs while working his way through school, so his job experience varied widely. He had a degree in art and education and was working on an advanced degree in psychology. He'd sold his artwork in many media and done well. He stated that his interest was in nature and her ways. Hunting with firearms, bow and camera, fishing, and backpacking were among his interests. I strongly encouraged him to join the world of knives, for his background and enthusiasm could well bring new life into the cutlery culture.

"There's joy in truly creating."

I've talked to other newcomers to the world of knives and enthusiastically awaited their influence. Many times I find that they soon digress into making the same kinds of knives that are presently available. As a result, I've been giving some thought as to why this trend to the average is so prevalent.

The way I see it is, the first pitfall to the new maker is a loss in direction. This often happens when the newcomer first begins to make knives. His attention becomes focused on the technical aspects, such as steel selection, forging, grinding, and heat treating—regimens that are usually foreign to his way of doing things—

and he becomes so focused on them that he loses sight of the tremendous gift of individual creativity that he could bring to the world of knives. He loses confidence in the ideals he once embraced and his knives become mired in the roots of tradition. His potential gift remains veiled.

The Initial Approach

As you develop the skills necessary to the basics of knifemaking, there will be times you feel that you know all you need to know when, in fact, it's only



When the newcomer first starts making knives, he may get lost in the technical aspects, such as forging, of knifemaking rather than focusing on his own creativity. Here the author forges a load shaft down to a flat bar.



Know exactly how your customers use your knives, whether it's to whittle or whatever, so you can best know your customers and serve their needs.

the beginning, a time to bring all your lifetime experiences into the knives you make and challenge yourself to do more. Through your research and total accumulated experience, you'll have the potential to make your own kind of knife. Should function be your goal, take the time to thoroughly test your knife doing the types of work with it you intend it to do. Constantly ask yourself "why?" and "what for?" when designing your knife. There should be no line wasted that will sacrifice purpose for the sake of design.

There's no need to choke your personal Excalibur with unnecessary glitter. Your knife, when it comes from your heart, will speak for itself.

There's no requirement that you make every kind of blade—from dragonslaying swords to folding miniatures—in order to be a true master, nor is there any mandate to specialize. Look at them all. Study the knife in legend and personally question all you see. One day you'll know wherein your challenge lies. This direction may stem from a composite of all the knives you've seen, combined with

"Constantly ask yourself 'why?' and 'what for?'"

"Build your kind of knife from your heart."

your desire to achieve a certain functional quality or exceptional beauty.

The type of knife you choose to make matters not. Your "honest knife" will represent a sum total of all your experiences. I remember a friend who, while in college, became obsessed with the business end of all biting insects. He could be found with his eyes glued to a microscope at all hours, his drawings, and written comments carefully preserved in volumes of documents. I smile when I think of the sort of knife he would have made.

Build your kind of knife from your heart—it's your potential gift to the world of blades. Those who know knives, your style of knives, will come to you, while others will pass your table at knife shows as if it contains some kind of social disease. Don't be offended by their disdain; your kind of client will find you. When you copy simply to sell knives without feeling and knowing their true nature, you offer nothing new. Your status

is second hand. Know your knives and you'll know honest self-respect. It's the joy of the struggle. There's equality and safety in stagnation, whereas there's joy in truly creating.

The sort of knife you choose to make will determine the kind of client you'll know. Should your specialty be hunting knives and you make affordable knives for hunting, you'll find yourself dealing with clients who are hunters. Woodcarving knives will bring woodcarvers to your table. The level of craftsmanship

you put into your knives will also influence the nature of the client you serve.

Honest Knives

A knifemaker gives himself the kind of knife he wants to make. He'll own that blade from that point forward. When a client views the knife, he won't share the same thoughts that the maker knew during its creation. Honest knives are a personal expression. No two people can feel the same emotion when coming to know the same blade. The true

**“Honest knives
are a personal
expression.”**

nature of appreciation is too personal to be known to more than one person. This doesn't mean that the art cannot be shared to mutual satisfaction. In making the kind of knife you want to make, you give your client a special satisfaction unavailable elsewhere. The knife will be good enough when it surpasses the expectations of your client.

It matters not what the majority of the world of knives thinks. I'm speaking of ego, your ego, the ability to stand alone if need be, to create something new from all the dreams of the past, then putting that special ingredient, the sum total of your personal experience, into something in which you believe and cherish.

Joe Szilaski, Hungarian by birth, learned many of the skills of the European craftsman. He worked as a “universal locksmith,” the Hungarian equivalent of blacksmith, machinist, and tool-and-die maker. Among other things, he made knives and cleavers. The Hungarian Revolution forced his evacuation to Austria, where he worked in a quarry. (While American students were fine tuning pinball machines, Hungarian students were fine tuning their anvils!) A year later he came to America, where he continued to work with metals in a foundry producing metal sculptures. Joe has com-

**“Your kind of
client will find
you.”**

bined European craftsmanship and the art of three-dimensional carving in all metals, tempered with the freedom of America, to bring a new expression of true art to the world of knives.

Should you, as a knifemaker, excel beyond your wildest dreams, it won't be because you worked hard or had the most elaborate shop. Your success will come from the fact that you're doing the very thing that you love doing the most.

Surely, the teachers in the world of knives are to share in the blame for failing to challenge their students to new frontiers. The goal of a teacher must be to teach with insight, driving his students through inspiration to seek higher levels without fear of failure, for everybody learns from failure as surely as they learn from success. This requires that the teacher provide all the information necessary to gain the basic skills—along with insight to the many questions unanswered—so that any knifemaker with the background and knowledge to bring new life to the world of knives will know that the opportunity exists, and he will accept the challenge.

How grateful I would be, as a teacher, if were I somehow able to inspire another knifemaker to elevate the craft higher than I can see.

What Exactly is “A Master?”

The author offers his assessment of what constitutes one

When I attended a forging tutorial taught by Bill Moran in Laramie, Wyo., years ago, I thought that I knew all there was to know about making knives. I was still an apprentice in the American Bladesmith Society and had to wait to test to qualify as a journeyman smith. Time passed and I received my journeyman smith stamp. At first I was very pleased, but there was still another waiting period and testing for my ABS master smith rating. When I received my master smith stamp, I once more thought that I “knew it all.”

Still, somewhere in the back of my mind I knew there had to be more—but what? There were no more formal waiting periods, performance tests or judges that I would have to please in the future.

I soon became acutely aware that there was a whole lot more information about knives of which I had either very little or absolutely no knowledge. The performance tests that I once considered extreme had become minimum standards.

As I pondered the issue, I was reminded of the parades honoring the Roman heroes when they returned from the battlefield. Behind each hero rode a slave who kept repeating a phrase indicating that all glory was fleeting. Why? The battle had been won; without a war to fight, warriors are without challenge and opportunity, so they must seek other fields of honor or else fade into obscurity.

What exactly is a master? I believe that, first of all, he is one who is truly alive in his work. If this



A maker who qualifies as a master to the author is Wade Colter. Wade's art bowie is 18 inches overall with a carved ebony handle and a damascus blade and guard. His address: Dept. BL11, POB 2340, Colstrip, MT 59323 (406) 748-4573. (PointSeven photo)

Few knifemakers can make the claim of master more legitimately than Blade Magazine Cutlery Hall-Of-Famer George Herron, maker of this superb sub-hilt fighter. (Weyer photo)



is true, I have known many masters in my life and read of many more who, while no longer on this plane, are still very much alive in the work and memories they leave behind. They all have had one thing in common: Each lived life to the fullest. In short, they were very much alive in the realm they chose to call home.

Mike Cleary ran a junkyard in my home town. It was a small mountain town, three blocks wide and three miles long, at the time hosting a population of about 1,700.

Mike positively loved his junkyard. Every piece of scrap iron had a history and a future. A visit to his junkyard was always an adventure. When I sought an old timber saw blade to render into knife blades, he never had a simple, plain, ordinary saw blade but one that had been used by "Paul Bunyan, Jim Bridger, Ten Day Jack" or some other legend, a blade that had been made from "the finest steel ever to cross the ocean on a three-masted trading vessel through the worst of storms." Mike was the master of Mike's junkyard and glad to be there. "Mike's Junkyard, Sweeter than the Hanging Gardens of Babylon," read one of his advertisements in the local weekly newspaper. Thus it was for Mike and this writer, also.

Knowing One's Limitations

A master must be aware of his limitations. A master in the world of knives cannot be master of all the provinces in the world of knives, for those provinces are far too many and varied. Knives have been a companion of man since man began, and have been made from wood, bone, horn, seashell, teeth, stone, copper, bronze, many steels, and more.

"The true master may blossom to the demands of the time in which he lives."

"It matters not whether others agree with him; what matters is that he makes them think."

best that we, any one of us, can hope is to master that one small corner of the world of knives that interests us, then explore that corner with all our energy and hope to come to know at least a part of our domain. The master must be aware of the relationship of knife to man in his time and place.

It must be remembered that no knife stands alone, for the knife is a tool and must be considered a companion of man in his time. In the 1800s, there were knives of America, Africa, Europe, Spain, and other regions existing all at once. Some were for warriors of actual battles, some for warriors cloistered to their civilized environment, some for armchair warriors dreaming to participate. Meanwhile, there were knives of the frontiers that faced their own challenges and more. The true master seeking to understand such knives must take time to keep the knives he loves in perspective as they relate to man.

A master must have what I would call a child-like enthusiasm for exploration. For example, consider a little kid on the frontier, wherever and whenever that was, who forged his first knife on the family's or neighbor's forge. For a time, the youth was a master of his knife, for he was completely obsessed with his task—and there is no joy as great as that first success to be realized.

The true master may blossom to the demands of the era in which he lives. Consider John Singleton Mosby, a hero of the Confederacy. He was a sickly youth, of slight physical stature who found, by virtue of the times, a cause that transcended his shortcomings. His accomplishments are legend and would have never been considered possible by those who knew him before the Civil War. The challenge of the period matched his hidden potential and a master was born.

What about the importance of intelligence? While intelligence is a fine attribute for a master, never underestimate the potential force of any

individual who is absolutely dedicated to succeed. When one puts all his energy into focus, he is very well able to contribute greatly to the prevailing culture with a childlike gift of vision, bringing prominence into what may have been overlooked or ignored.

It is wrong to believe that masters are completely in command of their chosen specialty. They may be the best there is, but the true master is unfinished—and he knows it. The single most cherished aspect of a master is that he knows he has a lot to learn and he simply loves exploring the frontiers of his vision. It matters not whether others agree with him; what matters is that he makes them think. Most importantly, he dares to continually challenge himself.

Eric Hoffer wrote a book called *The True Believers*. True believers are masters and encourage all who will listen to pursue or join in their cause. Not all true believers are benevolent or correct, but they are obsessed with their cause and will spare no energy in the exploration of the fron-

tiers they choose to command. True believers have led nations to prominence—and destruction.

Masters also fall from grace. For instance, Samson found his Delilah, David his Bathsheba. Essentially, masters are the same in all fields. They demand excellence and seek perfection, knowledgeably accepting legitimate compromises of reality while remaining loyal to their principles.

Obsession fuels their driving force to excellence. The true master is alive through his work rather than simply making a living.

The difference between a master of craftsmanship and a master of the true spirit of the knife lies in the nature and direction of the

force that drives him. Supported by his knowledge that he is but a student earns one the title of master. As citizens of the world of knives, our frontiers are to recognize the artifacts of those who fit our individual tastes to qualify as true masters. Once those masters and their artifacts are identified, we can only enjoy the product of their journey in the frontiers of the knife.

**“The true master
is unfinished—and
he knows it.”**



When it comes to reproducing antique bowies, nobody has it mastered quite like Alex Daniels. His Broomhead & Thomas folding bowie repro features a mother-of-pearl handle, gold fittings, and engraving by Chris Meyer. Closed length: 4 1/2 inches. Daniels' address: Dept. BL11, 1416 County Rd. 415, Town Creek, AL 35672 (205) 685-0943. (PointSeven photo)

Mistakes I've Made

In the world of knives, humans interact with humans and, thankfully, perfection isn't absolutely required

The other day I renewed acquaintances with a lady who some years ago bought a knife from me for her husband. She said she paid the handsome sum of \$75 for the knife and was glad that she bought it when she did because it and similar pieces have become so expensive. As I recall, the blade was stock removal, made from a used D-2 steel planer blade, and the guard was sculpted from an old bar of copper that I had picked up at a junkyard. The handle was, naturally enough, sheep horn. The knife wasn't bad for an early model but a long way from where I hope my knives are today.

On the way home I thought about a discussion I had that same day with a client who ordered a knife four years ago. I made the knife and my better half, Angie, sent the client a letter advising him that his knife was ready. He called me and stated that the piece was priced much higher than when he had ordered it. He said he felt that a deal was a

deal, and he wanted to know why I was asking so much more money for the knife.

I explained that I'd learned a lot since the time he'd first ordered it, and that the knives I make today require more time, knowledge and, I hope, higher levels of craftsmanship than the knives that I'd built previously. He asked me what improvements I'd made and we became involved in a discussion that lasted about 30 minutes. Following our conversation, he said that he understood and agreed to take the knife.

His frustration with the price was my fault. When I started making knives, I had no waiting list and a lot of learning ahead of me. I didn't foresee the changes that would come to be in my knives, or the increase in time and labor that they would require. As my knifemaking knowledge and talent improved, I naturally believed—or hoped—that my clientele would know that my knives



Once, Fowler gave away a knife that had been improperly heat treated. (Note how the temper line drops to the cutting edge in the center of the blade.) He believed there was no chance that the knife would ever be in circulation but it has resurfaced on the market not once but several times.

would increase in price as their value increased. Most of my clients know this is the case, but some don't understand without an explanation on my part.

I feel that, years ago, I should have made a statement that "these prices may increase as my talent, knowledge, and the quality in my knives increases." A statement to this effect could have helped avoid hard feelings on the part of some of my clients and sense of fault on my part.

It would be another story entirely if I were still making the same knife as I did when I started. I didn't enter knifemaking to sell knives; I entered it because I wanted to make them and hoped eventually to help achieve the Excalibur of my generation. The day eventually came when I had given my friends all the knives they wanted, and so I had to start selling some of my work.

Kids figure lots of things out and thus, as a young knifemaker, I found a way to subsidize my experiments and the development of my skills. When I started, I sold knives for as little as \$5 and

"His frustration with the price was my fault."

they may have been worth it at the time. That \$5 for a single knife bought me another "Swedish timber saw blade," and I could make 20 more knives with enough material left over for a few of my early rudimentary experiments.

The good folks who bought my early knives provided me the opportunity to make more. Every knifemaker is beholden to his clients, for their support provides the financial and emotional nourishment that stimulates all makers to expand the frontiers of their craft.

The Knife That Wouldn't Go Away

Occasionally, all knifemakers make bad blades. A simple knife has little room for error but, as we makers push the performance qualities of our blades, the opportunity for error increases. Usually, I learn what I can from faulty blades and then destroy them.

However, one time I let one of my ranch hands have a knife that I used for an article concerning etched blades. The temper line obviously dropped to the cutting edge in the center of the blade. This por-



The author entertains his audience with a discussion of knives during a 1999 BLADE Show seminar.

tion of the cutting edge was too shallow to provide a high-performance knife. I photographed the blade and discarded it.

My ranch hand picked the blade out of the scrap pile and requested that I help him finish it as a knife for a Father's Day gift. I explained why it wasn't worth fooling with but he insisted. He had an old sheep horn that he had found for the handle. With steadily decreasing enthusiasm, I agreed to coach him through to a finished knife. I believed there was no chance that the knife would ever be in circulation, and that his dad would keep it forever. Meanwhile, I coached my ranch hand and the knife he finished looked a lot like one of mine.

Three years later, the knife surfaced on the market. Somehow, it ended up on a city street, was found, and brought to me for any historical information I could provide. I recognized the knife immediately and related the facts concerning it, and all was well for a while.

Several years later, I entered a sporting goods store and the knife was in a display counter labeled as a "Fowler knife." I enthusiastically explained the situation concerning the knife and the Fowler name came off the price tag. There were some hard feelings associated with the event. A year later, I again encountered the knife in another sporting goods store. This time my name wasn't associated with the piece, but I still received several phone calls from potential customers concerning its origin.

A few years later the knife again appeared, this time at the BLADE Show. Offered for sale as a "Fowler blade at a reduced price," it was still priced much higher than what it was worth. Several folks who were interested in my work asked about it. Finally, I agreed to subsidize the purchase of the knife if the man who was going to buy it swore to take the piece, use it to death, and never let anyone see it again. He agreed but somehow I still fear

**"I've seen the
same scenario
haunt other
knifemakers."**

that some way that lousy, rotten blade will again come back to haunt me.

Haunting Scenario

I've seen the same scenario haunt other knifemakers. One time I was at a gun show and observed a damascus knife for sale identified as coming from the forge of a good friend of mine. It had all the earmarks of one of his knives, but something was wrong—the blade didn't look right. I asked to see the knife and found it covered with a greasy substance. I attempted to wipe the blade off and a loose weld on the side of the blade stuck in my finger. I knew my friend would never finish a blade of such poor quality. I photographed the knife and sent him a picture of it. He recognized the blade immediately and related the now familiar story. He had made the blade, knew it was defective, and had absolutely no intention of finishing it into a knife. A good friend of his saw the knife, asked to keep it as a memento of their friendship, and my maker friend gave it to him,

never dreaming it would be put into circulation. Somehow, someone made a handle for it, strongly resembling my friend's style, and sold it as a knife made by my friend.

The Willow Bow Ranch Knife-maker's Absolute Rule: The maker should never, ever, no matter who begs or what circumstances come to pass, let a knife blade out of his/her shop that he/she knows is defective. There is one viable alternative: The maker should mark

the blade in an eternal and obvious manner "experimental" or "defective gift to friend," or whatever will absolutely identify the blade as an exception to what the maker offers for sale.

These aren't the only mistakes I've made; there have been many more, and new mistakes await me. In the world of knives, humans interact with humans and, thankfully, perfection isn't absolutely required.

**"I still fear that
some way that
lousy, rotten blade
will again come
back to
haunt me."**

When First Place Isn't Necessarily the Best Place: Part I

In Part I, the author critiques knife show judging competitions

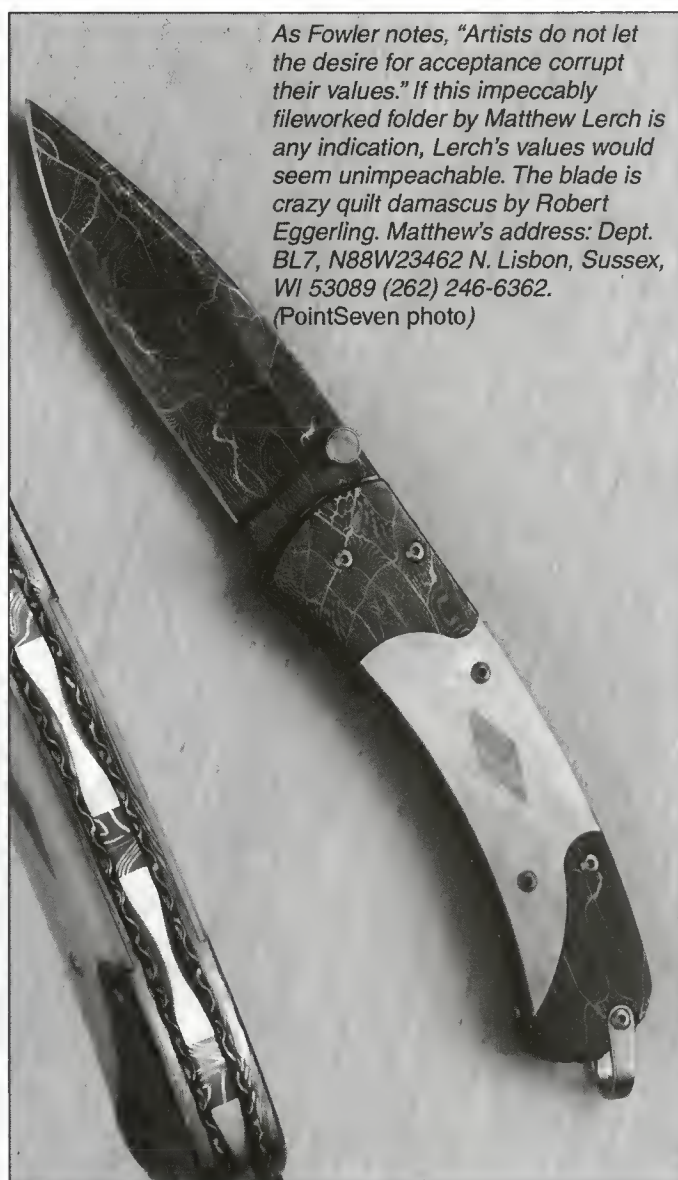
"Throughout the whole history of art, committees and juries, whoever composed them, have failed to pick winners."—Robert Henri, The Art Spirit, Westview Press

There are two types of competitive events that can be a part of many knife shows. First and most prevalent are the judging competitions where knifemakers make and enter pieces that fall under various classes, such as bowies, fighters, utility knives, folders, etc. These events, judged by individuals whom the sponsors of the show feel are qualified to evaluate blades based upon the individuals' experience in the world of knives, are most popular. The other event type consists of competitions where knives are judged solely on performance. The most significant example would be the rope-cutting competition.

In order for all these events to remain in perspective, I feel that some issues need to be considered concerning knife show competition in general.

It has been a long time since I attended my first knife show as an exhibitor. I was like a kid at his first county fair, in awe of the diverse nature of the people and events that evolve at any gathering.

One exhibitor had not sold a knife and very few people had shown much interest in his product. He had entered the competition for the best new maker. When the winners were announced, he was judged the winner of his class. Immediately, his table was surrounded by clients with new-found enthusiasm for his knives. Obviously, the judges' decision influenced some clients' opinions of the maker's knives. Some enthusiasts of the cutlery industry rely on such competitions to influence their purchases, and winning the competition may be good for the victor's business.



As Fowler notes, "Artists do not let the desire for acceptance corrupt their values." If this impeccably fileworked folder by Matthew Lerch is any indication, Lerch's values would seem unimpeachable. The blade is crazy quilt damascus by Robert Eggerling. Matthew's address: Dept. BL7, N88W23462 N. Lisbon, Sussex, WI 53089 (262) 246-6362. (PointSeven photo)

I have entered the judging competition at two knife shows. I won one event and a trophy hangs on my wall. At the second show, I do not remember what class I entered but I was not the winner. The judges presented the makers who entered the competition with written comments concerning the makers' knives. I read the comments many times for several weeks, considering the judges' suggestions. Finally, I reasoned that, should I decide to follow the direction the judges' comments indicated my knives should take, I would not be making knives of my choosing but of the judges' design. I did not opt to be a rebel, only to be true to the knives of my dreams.

Not too long ago I was asked to judge at a show. I thought about it for some time and then, after much deliberation, decided to accept the invitation. As it turned out, I was not selected to judge. Still, it had been rumored that I might be one of the judges. While at the show, one of the makers who entered the competition commented to me that he had made a knife that he knew would be to my liking. At that point, I came to appreciate the fact that I was not selected to be a judge, for I did not offer to be a judge with the intent to influence the makers in their style, but to offer my opinion concerning the design of the knives they chose to make.

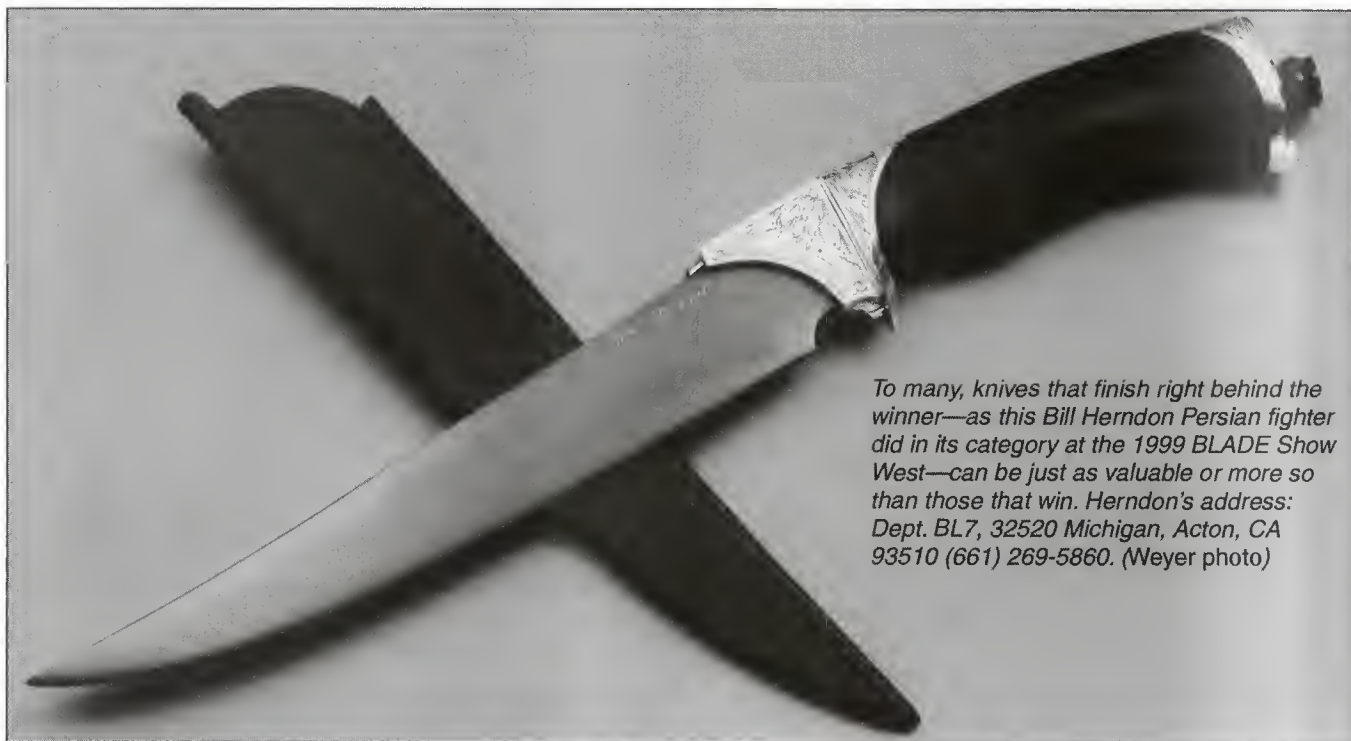
“Awards all too often demand that the artist please the judges rather than himself.”

These three events, many conversations, and a lot of time thinking about knife show competitions have prompted me to consider the competitions as a topic of discussion. I fully realize that many excellent makers enter knife competitions and find them highly rewarding and exciting. Many times the knives that earn awards are tributes to the cutlery industry

and the trophies are earned by hard work and dedication. I congratulate the winners and admire their commitment. On the other hand, I feel there are some aspects of this type of competition that should be open for discussion.

Unforeseen Consequences

How often have the judges been accurate in picking long-term winners when selecting the best new maker, for instance? While there is no documented record of which I am aware, I feel that all too many of those chosen best new maker have dropped from the industry long before those who also competed or did not compete at all. Could it be that the fledgling maker loses some of his appeal as a creative artist when he makes knives to the satisfaction of the established authorities? I feel that if a new maker is deserving of recognition, it must be because he has his own ideas.



To many, knives that finish right behind the winner—as this Bill Herndon Persian fighter did in its category at the 1999 BLADE Show West—can be just as valuable or more so than those that win. Herndon's address: Dept. BL7, 32520 Michigan, Acton, CA 93510 (661) 269-5860. (Weyer photo)

One also must consider the influence the judging has on the makers who do not win, for the direction of their potential contribution surely must be influenced as well. Could it be that judges and awarding prizes actually result in a form of control concerning the direction new makers' contributions to the industry will take, and that this control actually may be harmful to the career of the artist, as well as adversely affect the long-term direction of the industry?

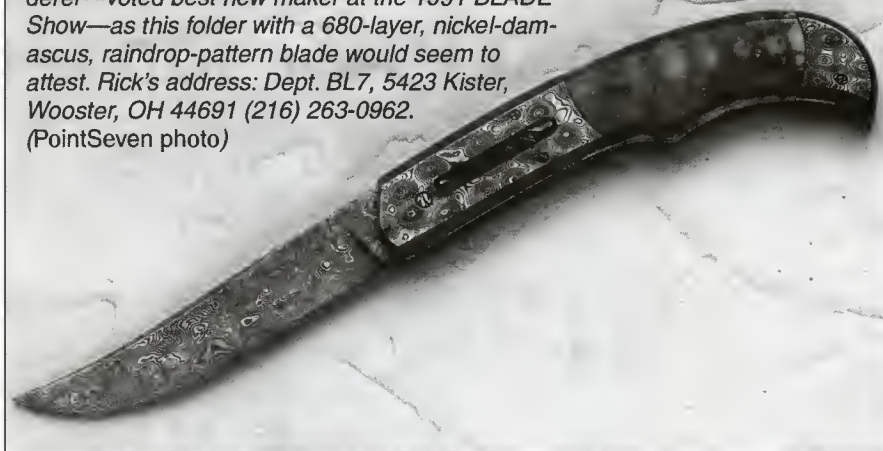
Awards all too often demand that the artist please the judges rather than please himself. Creativity is an individual and private affair and is most viable when it comes honestly from the heart of the artist. One must always remember that artists are not in competition with each other but with themselves.

I feel that many new makers have opinions and dreams of their own design that belong to them exclusively. It is their individual creativity that will not only keep them inspired, but also breathe longevity and passion into their work and the establishment of the knife as true art. Each maker should exercise the freedom and know the satisfaction that comes to those who make their own kind of knife, a creation that pleases him without the influence and prejudices of another generation. Should we, as supporters of the cutlery industry, wish to encourage the young artists of the world of knives, ours is not to judge but to encourage by becoming genuinely interested in their efforts and willing to accept their personal and individual contributions.

When the established leaders of the world of knives seek to judge the new breed, the utmost care must be exercised to avoid perpetuating existing prejudices in the art.

In all probability, official competition has been a companion of art since man first developed the ability to think abstractly and express his desire to describe what he saw and felt with his hands, or voice, or in his dance. The problem with art competition is that there often is no yardstick, no scale

How many times has a cutler voted "best new maker" later disappeared from the knifemaking scene? Such has not been the case with Rick Hinderer—voted best new maker at the 1991 BLADE Show—as this folder with a 680-layer, nickel-damascus, raindrop-pattern blade would seem to attest. Rick's address: Dept. BL7, 5423 Kister, Wooster, OH 44691 (216) 263-0962. (PointSeven photo)



and no scoreboard to adequately measure the message called art. Quality is in the mind and talent of the creator, and its acceptance in the eye or ear of the beholder. Artists seek recognition in order to share their vision and many, thanks to their dedication, do not let the desire for acceptance corrupt their values. When creativity and acceptance join in complete honesty, one can ask for no more.

America is becoming an art country, and a great many Americans wish to participate in art. They come from all walks of life and have varied interests. For many, judging is a significant part of their

“There is no yardstick to adequately measure the message called art.”

participation in this art movement. Many knifemakers compete in the judged events, and many more choose not to compete. When a maker decides to compete, he must realize that he is placing his talent in the judges' arena and, if he is to win, he must “play the game.” It is impossible to please all judges with the kinds of knives the artist chooses to make. Rejection is a part of being an artist.

As a knifemaker, if you enter such a contest and do not win, do not be discouraged or hold a grudge. Smile, be the critic's friend, have fun with it, and the competition will remain in perspective. Knives as art are simply the maker's way of sharing life with others. Do not dwell on rejection, listen carefully to the critic, consider the message, then make your kind of knife and enjoy it.

When First Place Isn't Necessarily the Best Place: Part II

The world of knives needs those willing to pit their originality against the fashion of the day

Editor's note: In the final installment of his story, the author critiques knife-performance events and revisits the influence judging competitions have on individual knifemaker creativity.

Of great interest to me are the knife-cutting or performance competitions. This is one arena of knife competition where empirical evaluation is possible and true winners reign. Some of the competitive events are realistic, while others leave me asking questions such as "why?" and "what's the point?" To keep the competition knives in perspective, it must be remembered that the knives are specialists—they have to be, for these are some highly contested events.

For example, when it comes to the hanging-rope-cutting competition, the knives must be designed to sever the rope with extreme efficiency. To consider a winning knife in this competition to be anything other than a finely tuned specialist is misleading. The best rope cutter cannot be an adequate camp knife because the best rope-slicing blade requires a hard, thin edge, while the stout camp knife must have a thicker blade that is tough and strong for chopping and other camp chores. A realistic analogy would be to compare a Kentucky Derby winner to a ranch horse.

These specialized high-performance knives speak highly of the ability of the individual knife-

Ed Schempp's knife excelled at cutting rope—Ed won the rope-cutting competition with it at the 1999 Oregon Knife Show. However, when the edge was used as a camp knife, a job for which the edge was not designed, it chipped. This was not Schempp's fault. It was instead a case of using the wrong tool—a rope-cutting specialist—for the wrong job—chopping. (Gallagher photo)



As the author notes, each knifemaker should realistically evaluate his or her knives, be it through function or history. Mark McCoun's damascus natural folder features mosaic damascus bolsters and a contrasting damascus blade. The damascus is by Robert Eggerling. (PointSeven photo)

maker to create a fine-tuned hanging-rope-cutting instrument.

The winners of these events

well know the intricacies of edge geometry, functional balance, and heat treating.

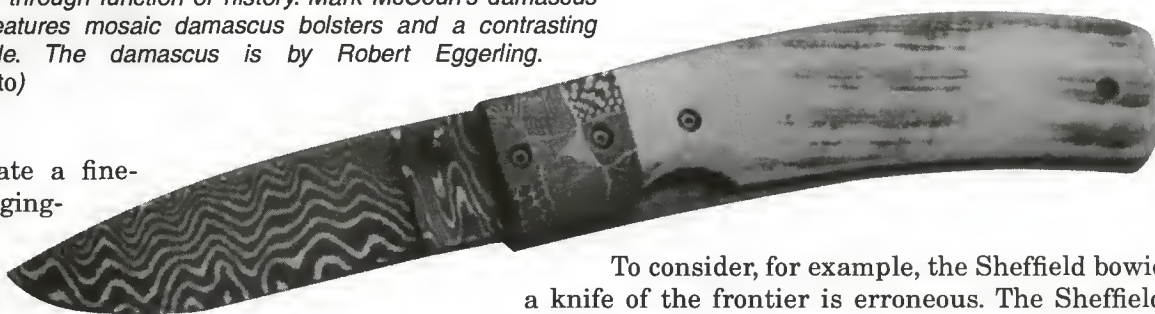
At the 1999 Oregon Knife Show, Ed Schempp competed against the cream of the crop when it comes to knifemakers who know what a rope-cutting knife has to be. With his knife, he worked his way from one length of 1-inch rope to eight lengths, cutting a total of 36 lengths of 1-inch rope without sharpening the blade. The cutting edge had to be hard, the edge geometry perfectly and specifically designed for the task. Schempp's outstanding knife did the job it was made to do. When this magnificent lady was put to the task of chopping seasoned wood, the edge chipped. Was the knife a failure? Most absolutely and certainly not! She was an outstanding success at doing the job she was designed to do.

Ed created a fine-tuned specialist, a tribute to the bladesmith's art. His knife did not fail to perform the task it was designed to achieve. It was a rope-cutting specialist, not a camp knife. Schempp well knows what it takes to make a knife that is up to any task, from chopping bone to slicing tissue paper, and proved his ability in the competition.

To properly judge knives, they must be considered in perspective. Know them for what they are meant to be.

Spirit of the Knife

An understanding of the spirit or true nature of the knife is necessary to keep the blades of history in perspective. There have been many knife fads. The 1800s knew the bowie, the 1950s the switchblade, and then there were the survival knives of the 1980s. Today, tactical folders know the spotlight. These pieces must be considered for what they were or are.



To consider, for example, the Sheffield bowie a knife of the frontier is erroneous. The Sheffield bowies were instead mass-produced symbols of the frontier and sold to men who wished to share a part of that heritage. Such bowies are studies of elegance and grace, fit and finish, high levels of craftsmanship, and were props for the photographer. They were knives of civilization but not truly knives of the frontier, for most of them lacked the most critical aspects of absolute dedication to function and dependability.

Some years ago I owned a fine Sheffield bowie, probably dating from the mid-1800s. Not knowing the value of the knife, my father gave it to a youth for helping him clean up his yard. That fall the youth brought the knife to me, wanting me to repair it. The edge was badly chipped. I asked him what he did with the knife and he replied that all he tried to do was dress out a mule deer. I

attempted to flex the edge and it chipped instantly, the edge being much too hard for the easiest field use. The knife was from one of the well-known companies and may or may not be representative of all Sheffield bowies. Still, judging by the design of many such knives, they were not intended for serious use on the frontier. It is OK to revere them but we, as knife enthusiasts, do a disservice to history and the knives themselves when we fail to preserve their memory for what they truly were.

Some knifemakers, such as Ray Appleton, John Nelson Cooper, Bob Loveless, Frank Richtig, Rudy Ruana, and William Scagel, hold or held true to their personal voyages of discovery and make or made their kind of knife free from the shackles of conformity and tradition. Knives from their hands are as exclusive as their signatures. Their truly unique knives have escalated in value far beyond the knives of tradition. Such makers are or were dedicated to originality more than to the fashion of the day. The fact that these men bring or brought new life into the world of knives is a tribute to

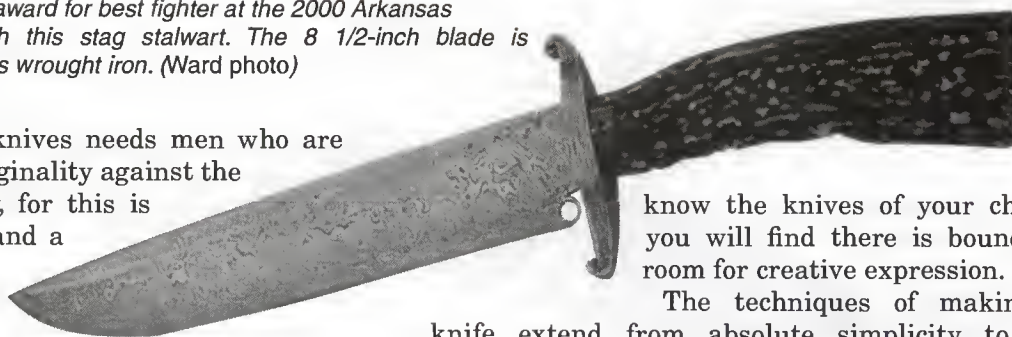
**“Do not judge
your knives solely
by the quality you
see in the work of
others.”**

Jerry Lairson Sr. won the award for best fighter at the 2000 Arkansas Custom Knife Show with this stag stalwart. The 8 1/2-inch blade is damascus and the guard is wrought iron. (Ward photo)

them. The world of knives needs men who are willing to pit their originality against the traditions of the day, for this is the basis of growth and a viable future for everyone in the cutlery community.

I would caution the new knifemaker: Do not judge your knives solely by the qualities you see in the work of others. Just because some makers have been around a long time does not necessarily make them authorities. I am at times in awe that many have become prominent in the knife culture in spite of their proclivity to consistently ignore knowledge, as well as their potential individual creativity.

Should the maker wish to devote his talents to one artifact of any culture, he needs to study carefully the knives of his choice. If you are a knifemaker, do not limit your study to the knives only. Consider the people who used them and their culture, for the partnership with man is the most significant aspect of the knife. The discovery of the nature of the partnership with people will unlock the door to memories, that something special all knife enthusiasts wish to share. As you come to



know the knives of your choice, you will find there is boundless room for creative expression.

The techniques of making a knife extend from absolute simplicity to the extreme limits of technology. Embellishment can be achieved very effectively with no more than a piece of sandpaper to the most expensive stones and precious metals. Once you find your direction, realistically evaluate your knives, be it through function or history, thoroughly test your knives according to your goals and enjoy the voyage. Do your homework and the influence of judges and competition will remain in perspective, for you will know more about your knives than any judge. Your expression of freedom, that special part of you, will impart honest spirit in your knives. It is the spirit of the honest blade that will add to the cutlery culture, attract more citizens to the world of knives and ensure its future. Freedom is the essential element of creativity. Use that freedom and enjoy life in the world of knives to the fullest.

Beware of the Medicine Man

Sharing knife knowledge bodes well for all

The brightly colored medicine wagon rolled down Main Street, dust rising from its wheels, as the townsfolk gathered for the arrival of the Pony Express and news from the rest of the world. The medicine man climbed up and stood on the back of the wagon and began his pitch.



There are few more noble goals in the world of knives than sharing knowledge, as Wayne Goddard, left, does while instructing at an Alabama Council Symposium.

He offered, for the mere price of a week's wages, a new "secret potion" that was a 2,000-year-old Chinese remedy. It would cure cancer, syphilis, rheumatism, impotence, and attract women like flies, he claimed. An articulate speaker, he attracted the townsfolk and, for the afflicted, inspired new hope.

As the people wasted their hard-earned money buying bottle after bottle, the old town doctor stood at the back of the crowd. He sadly shook his head while he watched them, many patients of his, lay out cash money for the worthless cure, the same people who hadn't had the means to pay what they had owed him for years. With mixed feelings he watched as they chased hopeless dreams. With great desire he wished some such cure existed, as it would have saved the lives of many of his former patients whose company he greatly missed.

The town marshal stood next to him as the event transpired. The aged doctor spoke of the travesty that they were witnessing, suggesting that the charlatan should be run out of town. He noticed that the marshal was rubbing his shoulder, a shoulder that had given the lawman some pain since the big bar fight years ago. The look in the marshal's eyes told the doctor that his suggestion fell on deaf ears, ears which would soon turn red with the after effects of the secret potion.

While you might smile when you hear of such events, the cancer that supports the charlatan still eats on mankind today. This seemingly trivial event is more malignant than it appears on the surface, for by its very nature the survival of man is threatened. He who sells his product on the basis of "secrets" either sells false dreams or is the keeper of a secret that, should it have any real benefit, robs all men of better times solely for his own gain.

The medicine man illusion survives in all worlds, and the world of knives is no exception.

I could very easily take a torch, play it on a blade, and create a temper line on the surface of a specialized steel and claim a new "secret" process that few could duplicate, and make great claims of its quality. The knives would sell without a doubt but my method would only add a little smoke, impairing everyone's vision of a better blade, for should I share my knowledge, another maker could very easily advance my discovery to even greater heights and all would benefit. Whenever knowledge is shared, it's also gained, as information shared grows beyond the vision of any single individual. The danger of competition emphasizing secrets or exclusive materials lies in the fact that it takes most from those who can ill afford the loss and preys on a great weakness of man, greed-humanity's greatest threat to survival.

That people depend upon each other, even in these "modern times," is revealed when one transformer can cause an electrical outage involving communities hundreds of miles away. Should one man's "secret steel" or knowledge gained from his "secrets" lead to the prevention of hardship, it's paramount to all men that it be shared.

Ultimate Survival

One day, man as a species may face the ultimate test of survival, either due to the whims of nature or man himself. Should this occur, you can bet that the "medicine man" will be out for his own interests and manifest little compassion for those who fall prey to his illusion. Mankind will know no comfort from him. Man's only chance for survival lays in the ability to develop an altruistic sense of community wherein humanity, love, and quality survival for all is the goal.

The world of knives is but a small pond in the immense waters of life. Still, leading by example in

the world of knives can be a road map for others to follow. Should knife enthusiasts of all stripes make a difference in but a small percentage of the rest of man, they will have contributed well.

Do I have secrets? Yes, thousands of them. Every time I make a knife, a new finite method makes itself known to me. I don't keep these secrets willingly. Only by their nature do they not become known. They're the secrets that come to mind during the thousands of solitary hours making knives—some of consequence, many insignificant when considered alone.

"A little more pressure here, blend the edge to tip this way, a change in sequence, 'a different' hold or stroke with a hammer," the list goes on and the mode of discovery is well known to all knifemakers. I would offer all these "secrets" willingly to those who are interested, but for want of words and time cannot find a means

of sharing them. Were I to write of each and every one, most readers certainly would be bored. Still, should anyone ask, he won't be denied. Fortunately, many knifemakers share this philosophy.

All blade enthusiasts swim the same waters. Those who buy the knives of the "medicine man" surely won't be interested in my blades. Nor do I seek to be associated with them, for they support the ideals for which I have nothing but disdain. All knifemakers compete by virtue of craftsmanship, design, and desire. My greatest competition is with myself.

When you share time and knowledge honestly with those who share your vision, you know good times with friends—and, I hope, influence the future nature of man toward a sense of community. The future will be shared by my friends, the coyote, and the rattler, proven survivors, as will the breed of man who's developed the skills of altruism and the hunter to carry on the species, Homo Sapiens, hopefully to a more perfect civilization.

"The medicine man illusion survives in all worlds."

Guilty Until Proven Innocent

Another anti-knife school rule punishes the good, not the bad

Joe was 13 when he entered his seventh school this past year. He has had it tough, moving from foster home to foster home most of his life.

Joe cannot compete scholastically with other kids and has been placed in what is termed "special education." While Joe will, in all probability, never know the glory that the public education system calls scholastic success, he does have some talents. He is gifted when it comes to mechanical aptitude,

he likes to work his hands, seeks friends, and according to family members, has never displayed hostility toward others.

Joe entered his new school in October 1998, missing the first seven weeks of the school year. As a result, he did not receive the carefully drafted documents concerning school rules.

Joe's new foster mother has raised many children, both her own and those of others. One of her children learned to make knives years ago in the



Fowler said that if children are taught by the kinds of people who do not know the difference between a weapon and a tool, America will know the same kind of failure that has condemned other great cultures. Here is Paul Crofts whittling, accompanied by his dog.

same school that Joe had just entered. Joe's new foster brother began teaching Joe how to make knives. Joe took to the craft enthusiastically. His foster mother has a kitchen full of knives that Joe's foster brother made, and Joe saw making knives as a chance to become a success, a very important achievement for a boy in his position.

He worked hard on his knife and soon it was ready for a handle. His foster brother saved him some deer antler and Joe was anxious to put his first handle on his first knife.

He lives one mile from the school and works at a lumberyard after school. He left home one morning this past March, his project in his backpack, with the intention of going straight from school to the lumberyard to work on his first knife. This was convenient because if he had not taken the knife to school, he would have had to walk one mile home, then retrace the same mile back past the school to the lumberyard to work on his project.

Joe knew nothing but enthusiasm. He was a success and had mentioned his project to two of his new school friends. When he arrived at school, he proudly showed one of his friends what he had made. As far as Joe knew, he had nothing to hide. He was not sneaking the knife into school, he was sharing his success with his friends.

School started, and Joe put the knife in his backpack and the backpack in his locker. He did not know he was breaking any rules. He had never been told that knives were not allowed in school, nor did he know knives to be anything other than a tool, a craft project, and a chance for knowing the joy of making something with his hands. To him, it was art that has been a part of mankind for as long as man has had thumbs.

Another student, who watched as Joe showed his knife to his friends, told a teacher. The teacher told the principal and Joe's locker was searched. The knife was confiscated and Joe was taken from class and immediately suspended for violating "federal rules" concerning knives in school.

Joe's enthusiastic success instantly became a failure. It is a failure that he cannot understand because to him the knife is a tool used at the family table in the kitchen. What is more, the knife he made was an accomplishment, a success that those

"Problem is, no one keeps score when a knife saves a life."

who know knives or have made something with their hands can fully appreciate. Joe cannot play the piano, write brilliant poetry or even understand what kids his age learn easily. If he is going to make his mark in this world, he will have to do it within the bounds of the skills he has. As it

stands, he is branded an outcast for doing nothing more than being a boy with special talents.

The Wrong Lesson

By enforcing the rules that even kids know make no sense, we as a people are teaching our future generations the wrong lesson. Is it any wonder why some school age children are angry? Is it any wonder that they become couch ornaments in front of the TV, or drift to drugs to substitute for the thrill of realistic accomplishment?

Do not get me wrong; I have no sympathy for punks who use a knife as an offensive weapon against another person. I firmly believe that human predators who choose to attack an innocent victim should immediately know the full force of the criminal justice system.

Arbitrary rules drafted thousands of miles from our shores by bureaucrats that gave no heed to the needs or desires of the inhabitants of the new colonies sparked a revolution, and thus began

the great experiment known as America, land of the free! Where did the rule concerning knives in school originate? Was it put to a vote? Did the electorate even know it had been enacted? I approached the local school administration officials on the subject. They could not produce copies of the "federal rules" they claimed to enforce, and referred me to the local library, where my

quest for documentation proved fruitless.

I contacted the Rutherford Institute, which has championed the cause of children victimized by what has become known as zero-tolerance rules of safety in the schools. I learned that schools are safer today than they were in the 1980s.

As for the "federal rules" cited by the local school officials, my impression was that the rules were conceived in 1994 or 1996 in what is referred to as the "Gun-Free Schools Act." These federal guidelines mandated that the schools use discretion in their enforcement. "Discretion" entails the

"They could not produce copies of the 'federal rules' they claimed to enforce."

right of all citizens to due process, that the intent of the students' actions be considered before judgment, and that remedies must be appropriate to the students' acts. Somehow, it seems to me, that some school administrations have lost sight of common sense when it comes to discipline.

I feel that if the children are taught by the kinds of people who do not know the difference between a weapon and a tool, America will know the same kind of failure that has condemned many former great cultures throughout history.

While concerned, I feel that if the parents of children in Public School 63 in another city decide to ban knives in their school, that is their prerogative, for it is essential that communities maintain control of their schools so the freedom that conceived America and the creativity that makes her great can nurture her future. It disturbs me greatly when some bureaucrat who knows nothing of the culture here in Wyoming, or your children's school, imposes a rule on the schools of an entire nation. The bureaucrats, the citizens' paid employees, have become dictators. If we as citizens do not draw the line and stand for our independence and create rules based in reality and justice tempered with understanding, I fear

**“Some school
administrations
have lost sight of
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we will surely lose our future leaders—the children—to carry on the great American experiment.

Joe does not stand alone. There are many Joes in many schools who have been subjected to the same malignant milestones of injustice as the American culture treads a downward path led by bureaucrats dictating rules that are not solidly founded on reality. Any tool can be used as a formidable weapon. To forbid its presence among all people

is legislative folly. Tools are needed to prepare, build, fix, and create. Tools make life more convenient, and the knife as a tool can and does save lives regularly—problem is, no one keeps score when a knife saves a life.

I strongly believe that, as parents, we are responsible for our children's education. As citizens, we must all take an active interest in what our schools are teaching and what is lacking therein.

Whenever injustice takes place in our communities, we must be as outraged as if we were the primary victim of that injustice, or soon there will be no one left to protest. Write letters to the local newspaper, attend your school board meetings and voice your concerns, support the creative teachers of your schools, call your legislators. Let them all know that you are concerned, and vote!

The Downside of Mint Condition Blades

*You can truly know a knife only by using it
as it was meant to be used*

My article about the “Lewis and Clark knife” in the June 2000 *BLADE*® received more reader response than any article I ever have written. I wrote it more than a year ago and sent it to the editor questioning seriously whether it should be published or not. My fears were that it would aggravate *BLADE* readers or be inappropriate somehow. As it turns out, many appreciated it and had a lot of fun sharing the emotions it obviously generated with their friends. Some commented that, knowing me and my obsession with function, they felt that if I had actually possessed a knife from the Lewis and Clark expedition, I very easily may have explored its performance potential as depicted in the article.

Recently, Gordon Minnis—author of an outstanding book for any knife enthusiast, *American Primitive Knives 1770–1870*—and I were discussing the issues that surround such a treasure. He asked what I would have done if the knife had been authentic. I have pondered some time over his question.

I believe that if I did in fact come in contact with such an artifact, I would first thoroughly explore and photograph every aspect of it. I would definitely sharpen the knife and cut some rope with it. Then I would learn as much as possible about the nature of the knife by having Rex Walter run a chemistry on the blade to discover the composition of the steel, as such a test would provide some indication of authenticity. I also would request that he perform a Rockwell hardness test to determine the hardness of the blade. The tests would not damage the knife signifi-

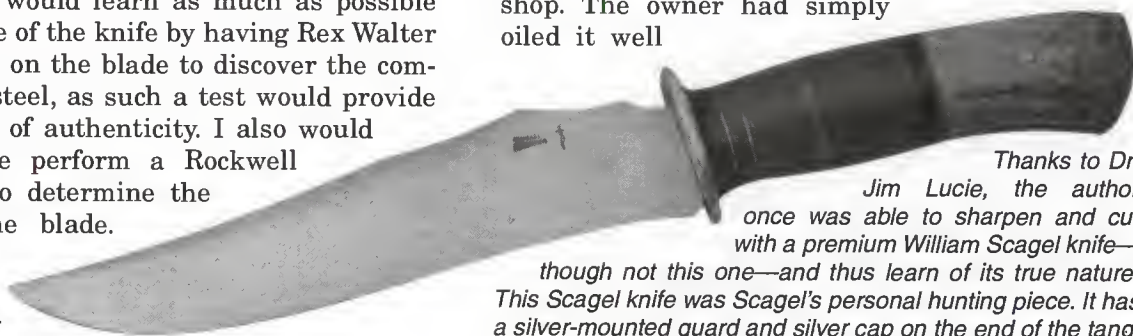
cantly and would bring to light some valuable technical and historical information before the piece could be declared a national treasure, and be committed to some institution for posterity.

The Swenson Conversion

Recently I experienced a similar situation involving a handgun. An elderly gentleman decided to sell his extensive firearm collection. Most of the firearms he had sold up to that point—and ostensibly continues to sell—were made between 1850 and 1980. His appreciation for excellence is obviously well manifested in the quality of the firearms he collected.

Not long ago, he brought in a Swenson conversion on a Series 70 Colt .45 ACP automatic pistol. As many readers may not be familiar with the legend of the late Amend Swenson, I will state that he was one of the top U.S. gunsmiths who devoted his talents to improving the accuracy of the Colt 1911 automatic pistol while still maintaining the gun's 100 percent functional reliability. He invented the ambidextrous safety and was a truly fine gentleman devoted to performance during the mid-1900s.

Anyhow, the pistol in question was in the same condition it had been in when it left Swenson's shop. The owner had simply oiled it well



Thanks to Dr. Jim Lucie, the author once was able to sharpen and cut with a premium William Scagel knife—though not this one—and thus learn of its true nature. This Scagel knife was Scagel's personal hunting piece. It has a silver-mounted guard and silver cap on the end of the tang. (photo courtesy Dr. Jim Lucie)

and put it away, never having fired it. The pistol's high quality of workmanship was obvious. At one time I shot many targets in competition and yearned for a handgun of such quality. The owner's asking price was \$720, which to me was then—and still is—a lot of money.

Visions of the pistol remained prominent in my thoughts for the next few weeks. I kept hoping that someone would buy her and remove the temptation, but every time I walked into the store she was there to greet me. Finally, the desire to explore her qualities outdistanced my fear of a questioning wife, so I bought the pistol. (Mrs. Ed [Angie] Fowler's note: I object to the adjective questioning on the grounds that I only question Ed's gun purchases when we have outstanding bills that must be paid!)

As I was getting ready for the 2000 BLADE Show, I did not have time to shoot the pistol but I did take her apart several times, cleaned and oiled her, and devoted my break times examining her workmanship. Then I found myself caught up in the dilemma of keeping her in pristine condition or actually shooting a mint condition firearm that can never be replaced. The day before leaving for the BLADE Show, I decided she was made to perform and ready for the opportunity for which she longed.

I walked out to my private shooting range with the Swenson Conversion and 250 rounds of my favorite hand loads. I fired the first shot, picked up my binoculars and was delighted to see a bullet hole on the paper target, 7 o'clock in the white, just out of the black bull's-eye. I then fired a group that was small enough to make any target shooter smile. I was immediately impressed by her smooth functional qualities. A few sight changes and I started putting the handgun through her paces. Bill, our hired hand, walked over, smiled, and commented that it looked like I finally had decided to shoot the pistol. He picked up the binoculars and spotted my shots. His comment: "You are eating the bull's-eye out of the target." My spirit soared with the eagles!

It did not take long before I was out of ammunition. As I walked back to my shop, I suddenly felt sorry for the man who previously had owned the pistol. Though he had possessed it for more than 25 years, he had never known the privilege, the absolute joy of shooting, and knowing the performance

"To add the quality of performance to the knife puts the package together."

qualities of one of the finest handguns I have ever known. Also on my mind was the fact that Mr. Swenson knew what he was doing when it came to making fine target 45s. I feel he would have been proud to know that the performance qualities of his workmanship were appreciated and had met the expectations of a shooter he would never know. Through his workmanship and my enthusiasm

we had shared some quality time together.

Use It or It's Abused

The same considerations apply to any artifact of history, be it a tool or a document. Tools are meant to be used, and books need to be read and their thoughts shared. Such items only have value through their service to man. I put as much time into the basic nature of the steel that goes into the knives I make as I do into their cosmetic attributes. High performance is the goal that drives me. Nothing pleases me more than to hear that one of my knives has met the performance expectations of its owner. Many a knife is pleasing to the eye and feels kind to the hand that holds her. To add the quality of performance to the knife puts the package together.

I well remember the time, thanks to Dr. Jim Lucie, that I was able to sharpen and cut with a premium William Scagel knife. By being permitted to enjoy the true spirit of the Scagel, I was able to fully appreciate the depth to which the maker dedicated his finely developed knowledge and craftsmanship to bring an honest knife to my hand.

There is much interest in "mint condition knives." Their value is always greater when they have been well cared for and left unused. Still, I cannot help but

feel that those who fail to use their knives are missing out on the greatest pleasures that our favorite tool, the knife, has to share with man—service and memories.

There are a lot of knives out there that were conceived, designed and intended only as art, and "cut" was never a part of their heritage. Such knives are best when admired visually, for that was their purpose. When it comes to knives that were designed by men who explored the frontiers of function, we can only truly come to know them through using the knives as they were meant to be used.

"Those who fail to use their knives are missing out on the greatest pleasures."

Brothers in Steel

In the final analysis, all knives are part of one big, sharp family

Some seek to forecast the future of the world of knives by basing their predictions on the popular pieces of the present. Many knives that are highly sought after now will become insignificant tomorrow, while some little known today will become very valuable and highly sought after.

For example, I recently noted a hand-made knife in Northwest Knives and Collectibles' April catalog. Owned and operated by Bill Claussen, Northwest Knives and Collectibles is an outstanding cutlery store in Salem, Ore., offering fine blades, both old and new. In describing the knife, the catalog spoke of "absolute mastery of the bowie." Made more than 150 years ago by a J.R. Rogers, the knife was valued at \$4,995 in the catalog. I'd never heard of the maker but, based on the workmanship and elements of design manifested in the bowie, I felt he had surely left his mark in the world of knives. I wanted the opportunity to get to know the knife and maker better.

I was a little bashful about sharing my find with my wife Angie and softened the news by talking about the BLADE® article I planned to write about the knife—along with the \$1,500 edged treasure she'd just purchased for me to be used for several articles. Fortunately, she thought I was kidding and dismissed the discussion. As the "new" old knife was only going to cost a little over \$4,000 more than I had paid for my old pickup, it didn't seem like such a bad deal.



Whether they use carbon steel or stainless, all makers are brothers in knives. Ed Baumgardner offers a 154CM hunter in the author's favorite handle material—sheep horn. Overall length: 7.5 inches. The engraving is by Mike Branham. The maker's address: 128 E. Main, Dept. BL9, Glendale, KY 42740 (502) 435-2675. (PointSeven photo)



This J.R. Rogers knife was offered for sale in the Northwest Knives and Collectibles April catalog for \$4,995. The stamp on the blade reads "J.R. ROGERS MAKER BUTTE MONTANA TOOTHPICK." Rogers lived in Butte in the 19th century. The knife is 13 inches overall. (Northwest Knives and Collectibles photo)

"Truth builds confidence, friends and repeat customers."

Luckily, fate intervened and another man spoke for the knife. Actually, several gentlemen spoke who knew better than I what she was worth. The last estimated value I heard on the bowie was several times the initial cost, and the increase was realized in less than two weeks. Those who sought her are serious students and collectors of ladies of her lineage. Her true value wouldn't have mattered because, if I had liked the knife, she would have never been sold—at least not by me—and I would have a \$5,000 investment Angie and I couldn't afford at the time.

The knife in question is but an example of a long-term value that's firmly established in the world of knives. Superior workmanship, artistic quality, and sound design are usually good investments. At the time the knife was made, between 1840 and 1850, she was in her prime; newspapers and dime novels were establishing her and her kind in legend and history. Her popularity (value) would be greatly enhanced by publications such as *The Antique Bowie Knife Book* and such movies as *The Iron Mistress*. Meanwhile, the maker may have had difficulty making ends meet at the time he fashioned the knife. Today, his work is highly sought after and well deserving of the honor.

Forged & Ground Brothers

The many fashions of the day that encourage countless knives flash like a Fourth of July rocket for a while, excite some for a moment, and then most fade to obscure trinkets of the past. The more significant events in the world of knives move much more slowly. Style and trends that last depend on more than the temporary nature of current interest. The lever that is the longest is the most powerful but moves with the least speed. Considering that the forged blade has been around for some time, I feel that it's safe to predict that she's here to stay. Her companions, the stainless-steel and stock-removal blades, have also firmly established themselves and will be right along with their forged sisters in the future.

There's a place and a use for every knife. In preparing to write this article, I quartered an apple with my beloved carbon-steel Frank Richtig

culinary duty knife. The blade has cut my steak and done most of the kitchen stuff I have to do for more than 20 years. Her companion is a paring knife proudly stamped "Forgecraft® High Carbon" given to me by my grandmother in 1958. Each time I use the knives, I carefully wash, dry, and replace them in their wall-hanging rack. Average time required for care is about five seconds.

Angie, on the other hand, uses a stainless-steel plastic-handle knife made by Ginsu for many of her kitchen chores. As these words are written, she's gone to bed and won't return to the kitchen for several hours. Her knife is soaking in a pan filled with soapy water, as it has on many occasions, without any damage to the blade or handle. We have and closely follow an unwritten rule around the Willow Bow: Angie doesn't use my Richtig knife, and I don't fool with her stainless blade. Is one knife better than the other? I think not. Each serves a purpose, and her love for her stainless knife has a definite, positive influence on the longevity of my carbon-steel knives. (For serious work, Angie also uses kitchen knives made by Warther and Son of Dover, Ohio, as well as a Mur-

"All have their place firmly established in the world of knives, and there's plenty of room for all."

ray Carter masterpiece, and takes very good care of them.)

Methods Of Manufacture

Along with the stainless vs. forged-carbon-steel-blade debate, there also exists a second issue: the methods of manufacture. The stock-removal makers have the option of using either carbon or stainless steel. There are also those who forge stainless steel. Many debates have taken place and many are to follow as to which method or material produces the best knife. Most debates speak in general terms, such as the age-old debates and wars over good vs. evil, the good points of steel "A" vs. the bad qualities of steel "B," as if all knives from "A" or "B" are the exact same quality simply due to their nature. These debates fail to take into consideration the most significant contributing feature to quality: the knifemaker.

Many premier makers nurture their dreams of excellence and achieve great personal satisfaction using their method of choice. They can be found working in the residential apartments of New York City to the jungles of the Philippines, on many different frontiers, all doing what they want to do—making knives. All their blades are of a different

Many debates have taken place and many are to follow as to which method or material produces the best knife. These debates fail to take into consideration the most significant contributing feature to quality: the knifemaker.



nature but each serves a purpose, be it entry-level pieces sold at carnivals or high-ticket knives displayed in satin-lined showcases.

There's nothing to be lost and much to be gained by the maker simply stating the true nature of his knives.

Some will flex, others won't. Some will hold an edge through extreme use, others won't. Some are easy to sharpen, some aren't. Some will rust, others won't—or at least they will “stain less.” The client who knows the performance limitations of his purchase makes it with the knowledge of what he can expect. This is called truth, and truth builds confidence, friends, and repeat customers.

Meanwhile, knifemakers can and probably should debate issues concerning which knife is best for what purpose and at what price, and continually seek to improve on their methods by sharing information freely. This is healthy for their personal growth, as well as helping to provide better knives for the future. Many dedicated men

**“The terrorist in the world
of sharp lies not in
materials or methods, but
in the misrepresented
knife.”**

make pieces of carbon, stainless, and forged steel. All have their place firmly established in the world of knives and there's plenty of room for all. The rules are simple: Knifemakers must be as honest as they can, always remembering that in the exact geographical center of the world of

knives is man, the object of all their efforts. Moreover, knifemakers must explore what frontiers they find interesting and, last but not least, enjoy their voyage in the world of knives.

Knifemakers are done a great disservice when any knifemaking method or steel is categorically criticized. The arguments tend to take the form of the age-old battle of good vs. evil. Nothing will be solved in debates of this nature and the cost is great, for all will be tarnished in the battle. There's plenty of room for any edged tool that comes from the heart of a knifemaker who seeks to do his best, be it his first blade or one of many. The terrorist in the world of sharp lies not in materials or methods, but in the misrepresented knife.

Chapter 3



Forging, Grinding and Heat Treating

This is the technical section, written in such a manner that all who read it will gain an understanding of the foundation of the High Performance Knife. This is a place where the explorer can travel many frontiers that will be new to him, discovering on his own many facets of the forged blade that may have been explored before but quietly await his visit.

Every piece of steel has a potential level of performance inherent in its chemical and physical makeup. Many events influence this potential. In the manufacturing process, cleanliness of equipment, management of the thermal cycles during the mixing of the elements, and the initial forming of the steel all play a part in the nature of the finished blade. The bladesmith has little control of these events, but through the careful selection, he can greatly reduce the influence of low quality steel by the process of elimination. The assistance of a metallurgical laboratory can be of great benefit to the bladesmith, but unless the metallurgist is familiar with the qualities of the forged blade, his contribution may be limited. The bladesmith has all the equipment necessary to experimentally examine the quality of the finished blade in his shop. The simple tests of slicing hemp rope (cut), the edge flex, and the 90-degree flex (strength and toughness), accompanied by his curiosity will take the bladesmith a long way to understanding the qualities of his blade.

Once the high quality steel is identified and selected, as long as the bladesmith does nothing to detract from the potential performance

qualities of his steel and through careful planning develops the potential to its maximum level of performance, he has done all he can to achieve excellence.

"It's the beginning, not the end, that puts the edge on a knife," goes the Ballad of Charles Goodnight by Andy Wilkerson. Truer words were never spoken. Once the right steel has been selected, the nature of the High Performance Knife begins with the first heat, the first hammer blow, and continues to build to the final stroke on the sharpening stone. Like grains of wheat filling a bin, each one by itself contributes only its portion to the whole. When the many millions of grains come together to be a total, they can weigh tons. This analogy best describes the nature of the High Performance Knife: many events done right, none taking away from the quality of the finished blade and all contributing their own special quality, each infinite contribution brings the bladesmith closer in his quest for Excalibur.

We had to fight a lot of tradition to achieve our goals thus far, not necessarily the traditions of the past, but those of today. There are no secrets revealed in this section. They have been well known for centuries in the shops of individual bladesmiths working on their own, each discovering for himself the techniques that lead to their personal Excalibur.

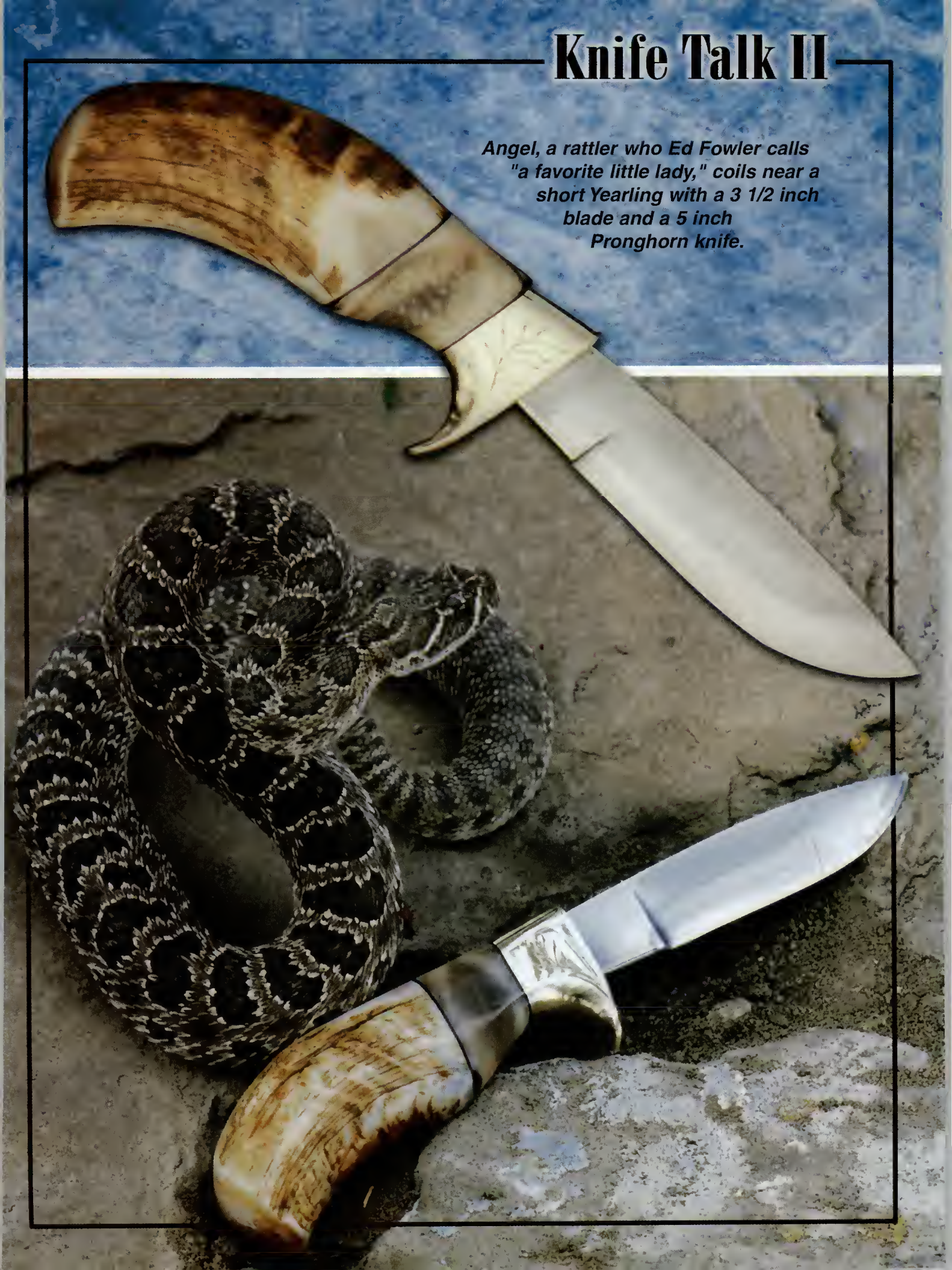
There was a time when tools were judged not by judges on the basis of cosmetics but by men using the knives for the purpose they were made and chosen to achieve. The maker of the knife was judged solely on the high performance qualities of his product. Those who achieved the high performance blade were immediately recognized and rewarded, for their product was in demand. This is the legacy some of us choose to seek.

We have no excuse for mediocre performance. The bladesmith of today has at his call the finest steel ever available. Ours is the best of times. There is no end to the pursuit of Excalibur. The more you come to know the steel, the higher the mark, always within sight but just above your reach. This is the joy of knife making.

Not everyone agrees with me, and this is a good thing, for debate completes ideas. Included are two point-to-point discussions that were a part of the saga of the forged blade.

Knife Talk II

Angel, a rattler who Ed Fowler calls "a favorite little lady," coils near a short Yearling with a 3 1/2 inch blade and a 5 inch Pronghorn knife.




Knife Talk III



Two Bowies on a blue background include an 8 inch Bowie at the top and a chain saw damascus Bowie with a 7 inch blade.

Knife Talk II

The image features three knives arranged diagonally across a blue, marbled background. Each knife has a long, curved blade and a handle made of bone or antler, which is decorated with a dark, branching pattern. The knives are positioned in a way that they appear to be overlapping. The top knife is partially visible, the middle one is more prominent, and the bottom one is the most visible, showing its full length and handle.

Ed Fowler pushes 52100 steel to the limit in this 6 3/4 inch blade with a 5 inch handle.

Knife Talk II



A long Camp knife with quillion features an 8 inch blade and 6 inch handle. At left is a 5 inch Pronghorn knife with a handle for big hands.

Knife Talk II



A Camp knife with a 6 inch blade includes a leather sheath, while the bottom knife is a Pronghorn with a 6 1/2 inch blade.

Knife Talk II

A 5 inch Pronghorn and a shorter Camp Knife are ready for cutting action.



Knife Talk II

A pair of 5 inch Pronghorns are designed for left-handed and right-handed use.



Knife Talk II

Two Yearling Pronghorns, one with a 5 inch blade and one with a 4 inch blade, are friends in the field.

The knife at the bottom is the Yearling that Bill Wiggins used to butcher 10 alligators in Florida.



Photos courtesy of PointSeven, BladeGallery.com and Blade Magazine

How to Grind the Blade

*Here's the next best thing to learning
"hands on" at the grinder*

"Should you ever get good enough to grind the perfect blade, you will be the first."

All knifemakers seek the perfect grind. Grinding blades that look and perform like you want them to requires developing skills that know no limit. Eye appeal of the hand-ground blade requires less basic understanding and is easier to achieve than truly high performance blade geometry. The quest for the ultimate blade grind is much more challenging to those who test knives for cutting performance.

Harry Truman was president when I ground my first blade that was even close to what a knife

should be. I tried to use my father's lapidary equipment and it was only for the grace of God that I was not killed. I had made other knives that barely passed "the requirement of cut" using a hand-turned grinder that was my grandfather's, but while the blades were, to me at least, tremendous successes, to the adult eye they looked like abused scrap iron and were relegated to the trash barrel when my parents found them.

Many knifemakers start making knives as adults, and I feel that they become overly frustrated when they compare their knives to blades that have been made by highly experienced men who have ground hundreds of knives. I believe that when you start early, you do not see how crude your product really is and this keeps inspiration pushing you to make more knives.

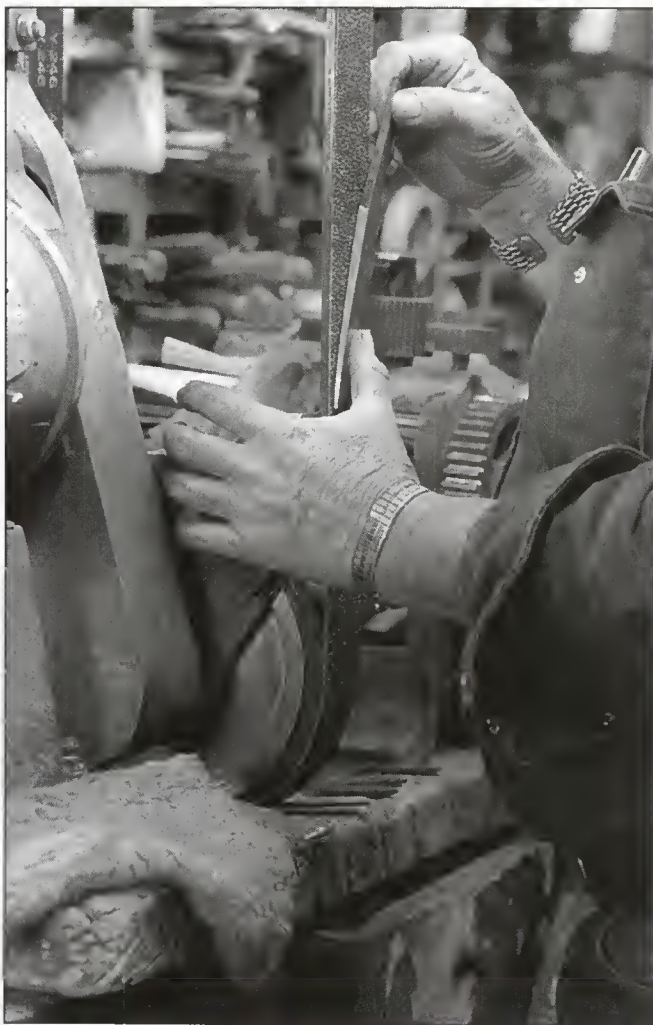
It is similar to the emotions experienced when you had to learn to play the piano. In the beginning, your first touch of a key was perceived as an instant success and you were on your way to playing in church the next Sunday. Due to your inexperience, each note, whether right or wrong, was perceived as a success and, by the time you finally achieved the ability to play *Twinkle, Twinkle Little Star* well enough that someone other than yourself knew what tune you were playing, there had been no room for a sense of failure. You simply did not recognize your level of accomplishment as anything but monumental success.

When the adult tries to make a knife, he already has learned many unrelated complex skills. His educated sense of perception recognizes a poorly ground blade and is too critical to recognize the success it could represent. In other words, you have to walk before you can run.

It is easy to consider grinding a knife a simple task. Since "many others can do it," the thinking goes,



First Grinds. This forged blade has been profiled top and bottom on the author's belt grinder. The only grinding that has been done at this point is on the surfaces in contact with the author's thumb and finger.



Establish the flats on the sides of the blade using the liams Platen, here done on the author's Burr King 960 2x72-inch belt grinder.

you honestly believe you can, too. Then you compare your knife to one made by a skilled knifemaker and you are overwhelmed by a sense of inferiority.

Any knifemaker will tell you that grinding a superior blade by hand requires a lot of practice. It is like comparing *Twinkle, Twinkle Little Star* to a Chopin symphony. A lot of motivation and dedicated practice stands between the basics and mastery of the art. Always remember: The development of a craft, even during its most crude and basic stages, heralds an accomplishment to the individual that significantly transcends the stagnation of time wasted.

The history of the knife is repeated by each individual learning the art. This is why many

**“Grinding a
superior blade by
hand requires a
lot of practice.”**



Fowler holds a profiled and flat-ground blade. The general tapers are established and are ready for the “plunge grinds.”

knives considered “Early Americana” are hard to distinguish from recently made blades by the hands of new knifemakers in the first stages of developing their skills.

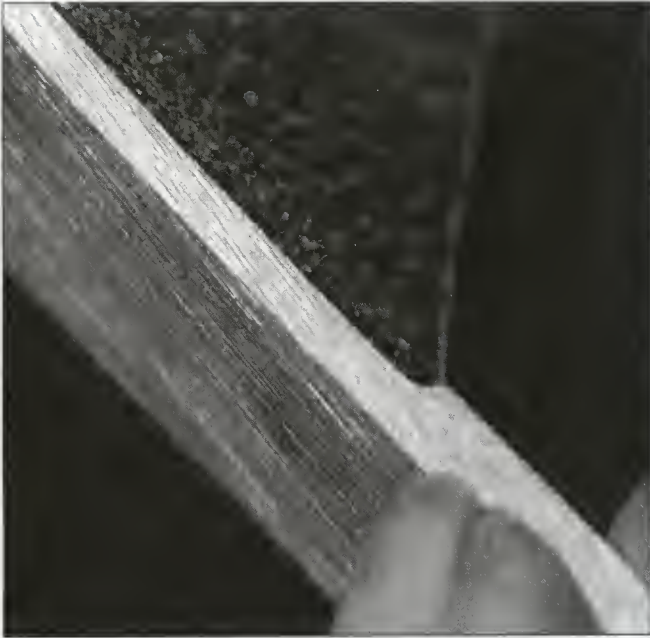
When you learn on your own, it takes a lot of time. This is why books, videos, schools, and other knifemaking instructionals are well worth the investment. They not only save you time and reduce frustration but they are also confidence builders. You can look at a lot of blades and not see those seemingly insignificant details that make the difference between a knife and a great knife. The trained eye that knows and understands the variations of blade geometry can point out the alternative choices to the aspiring knifemaker. Hence, you will be able to make decisions on the basis of knowledge rather than by accident. Nothing that you see, read or hear will take

the place of your dedication to master the art, as well as many hours of practice, evaluation, and practice.

I am going to attempt to describe how to grind a knife blade. A complete discussion would fill this entire magazine and still leave some questions unanswered. I hope that the fol-

lowing is of benefit to some who want to know.

I will start by stating that I feel this skill is one that will never be completely mastered by any individual. I learn new melodies with each blade I grind. I hope that I never come to the point where I feel that I know it all, for it is the challenge that keeps me at the grinder, not the accomplishment.



The author works the first plunge grind on a belt over the rubber drive wheel of his Burr King grinder.

The following are my ideas and are not intended as criticism of any other maker's efforts. Each maker has his own ways and there are many alternatives to any achievement.

CAUTION: If you believe that you can learn to grind blades without spilling some of your blood, you are in for a disappointment. Grinding belts sand your fingers with remarkable efficiency. Approach your grinder with respect, pay attention to what you are doing, and be prepared for accidents. A moment's carelessness can be an instant "wreck." Serious accidents do not happen often. Moreover, most accidents are not the fault of the grinder but the operator. *Safety is your responsibility.* If you have no experience with your knifemaking machine, take the time to locate a knifemaker in your area, call and request his advice, and visit him if it can be arranged. Should he decline your request, call another maker. Soon you will find a friend. Do not be afraid to ask!

No Gloves!

I do not wear gloves while grinding for several reasons:

1) Gloves are expensive, do not last long around grinders, and deprive me of the sensitivity I like to have while grinding a blade.

"Safety is your responsibility."



The uneven meeting of the blade and ricasso can be equalized by reversing the belt and grinding the "short side" even with the long side. No belt cuts exactly the same on both sides.

2) I feel the use of gloves is more dangerous than working bare handed. Gloves easily get ragged and could get caught in situations and pull your entire hand into a "wreck" where the simple loss of a little skin would have been less serious.

Never wrap a blade in a rag to protect your hand from heat while working on a grinder or buffer. The rag also can pull you into a "wreck" that happens so fast, you will spend months trying to figure out what happened. It is much easier to keep the blade cool by quenching it in water before it gets too hot to handle.

Grinding The Forged Blade

1) Profile the blade to the desired shape, developing the top and bottom lines. I usually do most of this on the rubber drive wheel because it is quieter and works well. Remember that the final sharpened shape of the blade will be slightly smaller after heat treating and the necessary follow-up grinding;

2) Establish flats on the sides of the blade on the platen. This provides a reference that will

“I learn new melodies with each blade I grind.”

allow you to find the center of the blade (the future location of the cutting edge). I feel that scribing a center line is unnecessary. Besides, I have never been able to scribe a center line that was accurate on the forged blade.

3) The flats on the sides of the blade will guide you to a realistic and functional center line for the cutting edge.

4) Your first *plunge grinds* are easily established on the edges of the rubber wheel. Be sure to use the belt and do not attempt to grind on the bare rubber wheel. The plunge grinds provide reference points for the following hardening procedures and are the beginning of the blade edge geometry.

5) While some knifemakers like to start with a 60-grit belt, I profile the sides of the blade using a 36-grit belt, seeking to develop each side as a mirror image of the other. This is necessary to provide a balanced distribution of mass prior to the heat-treating procedures to follow.

6) Grind the sides a little at a time, taking first from one side, then the other. I feel this results in less stress on the blade and helps keep everything equal.

While grinding the blade, I like to grind with the developing cutting edge up. This allows me to see *what is happening* while it develops rather than having to turn the blade over and *see what happened*. Each pass of the blade starts at the ricasso and I move the blade, grinding from the ricasso to the tip. I keep the spine of the tip of the blade balanced on my thumbnail, the tang of the knife held in the other hand between the thumb and fingers. This is the hand that guides the blade across the belt. Should you wish to remove more material toward the spine, simply rotate the blade slightly, applying more pressure toward the spine. All of my blades are developed with a convex grind, and I believe this grind is best accomplished on the slack belt between the bottom of the platen and the drive wheel. The belt tension can be adjusted when needed to change the angle of the convex surface. A change in the amount of pressure you apply to the blade can also influence the geometry of the convex grind.

I leave a slowly decreasing flat edge where the cutting edge will be, only bringing it to a sharp



Here's how the blade looks after the last pass with the 36-grit belt. Both sides are nearly equal and ready for working on down with progressively finer-grit belts.

edge with the last pass of the finest-grit belt. This method avoids slowly sharpening the blade away to nothing while shaping the sides.

SAFETY NOTE NO.1: When working on buffers and soft belts, such as the 3-M Scotch Bright, that can catch a blade, you must work with the edge down (flowing with the direction of the belt or wheel). I have never had a quality grinding belt catch a blade unless the belt was ragged, torn, or damaged.

SAFETY NOTE NO.2: Throw away or cut in half all damaged belts to keep from inadvertently using them again.

Body Control

The only way I have been able to keep my grinds level (avoiding what has been called “the 2-inch walk”) is to lock my wrists or forearms to my sides and, keeping my wrists steady, gently rock

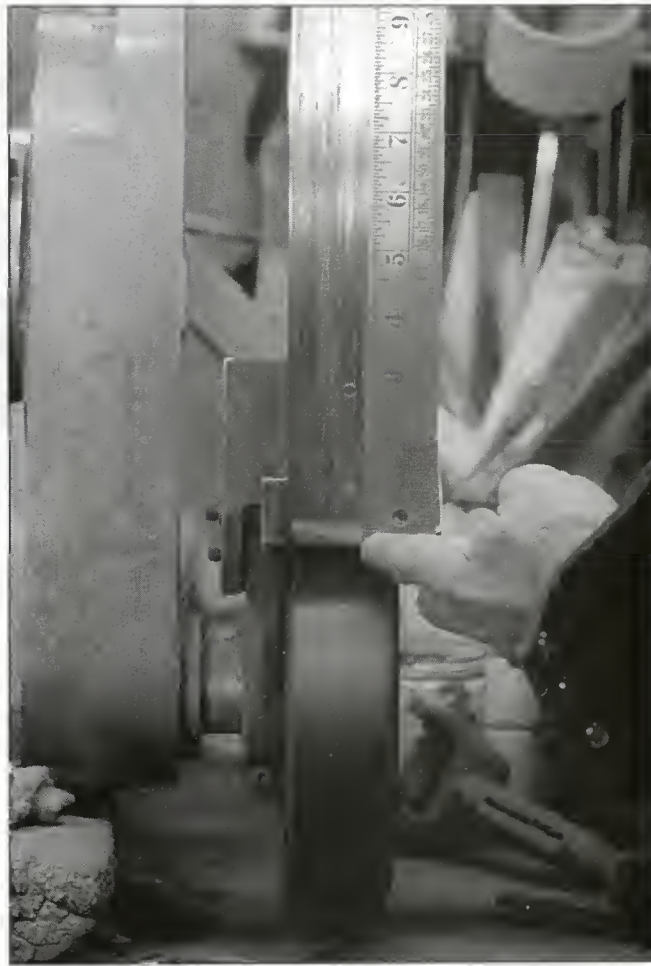


The author slack-belt grinds the convex sides of the blade. The blade is about 3/4-inch below the bottom of the liams Platen. The author's wrists are firmly locked into his sides as he moves his entire body back and forth (or left and right) to develop the blade evenly. Note: When turning the blade to examine the progress of the grinding, always lean back away from the grinder to avoid catching the blade in the belt or between the belt and drive wheel.

from side-to-side (or left to right) with my body, moving the entire length of the blade across the belt with each pass.

I keep my feet about 10 inches apart for comfort and control. You will soon find what distance works best for you. This method is the best way I have found to transform my body from a bundle of joints to an accurate human grinding machine.

All my blade grinding is done on a Burr King 960 2x72-inch belt grinder. This grinder is not currently available from Burr King but John Malick of Tru-Grit (Tru-



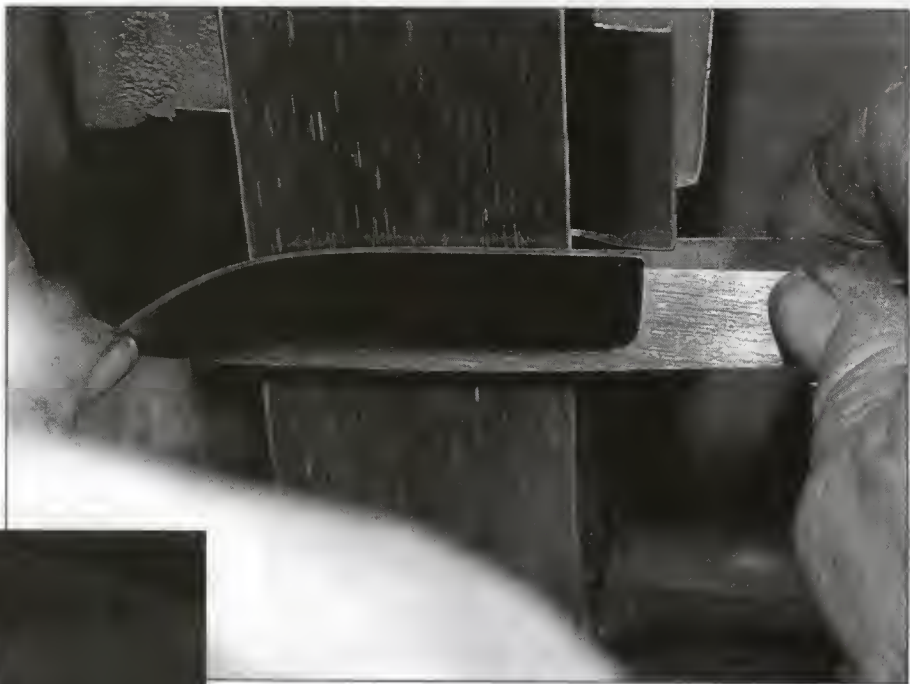
This is the liams Platen. Fowler and the late Dick liams designed it and the author named it after liams. It bolts on the Burr King mount. Simply remove the original platen and bolt the liams Platen on in its place. The liams Platen is 12 inches long, 3 inches wide at the base, and 1 7/8 inches wide at the top.

Grit Inc., attn: J. Mallek, Dept. BL7, 760 East Francis St. #N, Ontario, CA 91761 (909) 923-4116 or (800) 532-3336) is now selling a 2x72-inch grinder named the Hard Core that is the quietest, high-precision belt grinder I have ever used. The belt tension is fully adjustable and the Hard Core model is well worth the money.

The late Dick liams and I worked on several designs of platens and came up with one that I like. I call it the "Iiams Platen" in his memory. It bolts on the Burr King mount. Simply remove the original platen and bolt the Iiams Platen on in its place. The Iiams Platen is 12 inches long, 3 inches wide at the base, and 1 7/8 inches

"When working on buffers and soft belts, you must work with the edge down."

Slack-belt grinding: Note that the tip of the blade is perched on the author's left thumbnail and the tang of the blade is held between his thumb and fingers



The author's thumbnails are his homegrown grinding jigs.

wide at the top. The 3-inch base is 2-1/2 inches above the center of the rubber drive wheel and supports the belt for slack-belt grinding. The 1-7/8 inch top allows rolling the belt over the edge of the platen for cleaning up the juncture where the blade and tang meet. The Iiams Platen is available through Jeff Carlisle, c/o Swains Spring Service, Dept. BL7, P.O. Box 1606, Great Falls, MT 59403 (406) 452-1246. It looks a little different than the one pictured but works the same.

Additional Tips

Do all initial work with a coarse belt. When a belt quits cutting, go to a fresh one. There is no benefit smoking up your shop using belts that are not doing the job. Dull belts do not cut clean lines or remove steel efficiently. I establish the blade profile on a 36-grit belt, then gradually work down using the following grits: 36, 60, 120, 240, 3-M A-30, A-16, and A-6. I then start buffing with a 3-M

neutral Scotch bright 2x72-inch belt loaded down with Brownells 555 Gray buffing compound (available from Brownells, attn: B. Fenton, 200 South Front St., Dept. BL7, Montezuma, IA 50171-1000 (515) 623-5401), then to a loose muslin buffing wheel again loaded with 555 Gray.

Remember: Position the blade edge down flowing with the direction of the buffer on these operations. The buffing surfaces will catch a knife edge or point.

When you go to the finer belts or buffers, all you are seeking to accomplish at this point is to remove the scratches caused by the previous belt. Do not try to change profiles with fine-grit belts; all you do is wear out the belts and burn steel. When you observe deep scratches, back up one grit and clean them up, then head back down to the finishing belts.

And one more thing. Old belts make excellent sandpaper. If you are like me, they will become like zucchini squash: soon you will have too many to store. Give them to your knifemaking friends until they won't take anymore, then start throwing them away.

Author's note: A superlative discussion of all safety precautions is not included in this article. Safety practices involving the use of safety glasses, respirators or dust masks and filters, keeping flammable dust swept up, fire extinguishers on hand, etc., have been covered elsewhere and should be reviewed by all those involved regularly. I desired to include only topics I have not seen in print.

Tip-Top Blade Tips

The author reveals his keys to getting the most out of the end of the blade

Sometimes, the tip of the knife blade is where the cutting or working action begins. While many knife functions don't depend on the tip, a well-designed one can get you into your work with style or, if ill designed, make the task more difficult. A careful study of the blade tip is also an excellent place to begin to evaluate the functional properties of the knife. The physical design must complement the nature of the steel to achieve maximum functional potential. As is true in any performance decision, there are trade-offs—i.e., a little more of this dictates a little less of that. You can't always have it all.

A well-constructed tip is as much a work of art as any other aspect of the knife. The first consideration of the tip is to ask, for what is it designed? Knives destined for light work, dissection kits, or digging out splinters should have tips that are necessarily thin and delicate in order to penetrate easily and disturb the surrounding tissue as little as possible.

Some specialized skinning knives have no tip at all. Such blades are for skinning only. For instance, while slicing the hide from a carcass, the lack of a tip reduces the probability of cutting unwanted buttonholes—holes where no holes are wanted—in the skin. Knives without a tip also provide an extra margin of safety as there is no tip to stick something or someone—including yourself—inadvertently.

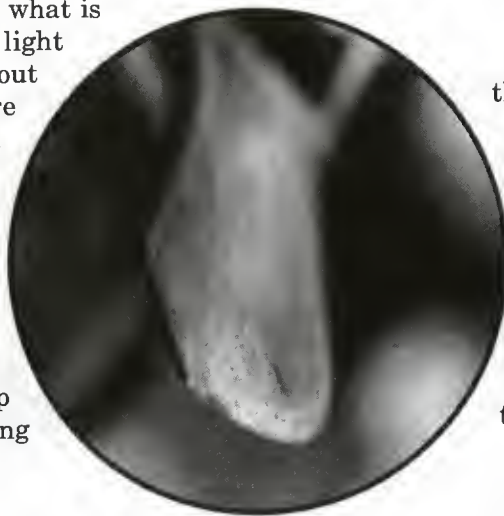
Knives intended for general use should have more strength supporting the tip. Adequate strength in order to reduce the probability of bending or breaking the tip depends on several factors: the nature of the steel, its hardness and toughness, and the structural design of the tip itself.

I believe the tip of an all-purpose blade intended to be used for penetration should be aggressively pointed. Often, tips made by beginning knifemakers are rounded from the start. After a little use, the tip, rather than coming to an aggressive point, ends up being blunted or rounded. This may result from coming in contact with a hard object, or from normal use or improper sharpening.

Tip Tests

There are several easy tests that readily reveal the nature of the tip. One is by simply looking at it—though the true nature of the tip isn't always immediately apparent by visual inspection. Nonetheless, an exceptionally dull tip should be obvious.

Another test is to grasp the blade in your hand between your thumb and middle finger and lightly touch the tip with your index finger. A sharp tip will communicate its aggressive potential immediately. A safer method is to hold a sheet of paper in one hand and, with the spine of the blade held toward the paper with the other hand, determine how easily the tip penetrates the paper.



A Michael Price piece owned by John Andrew Clinton has one of the cleanest, best-designed and most functional tips that the author says he has ever seen on an old knife. The slight swelling in the midsection of the blade behind the tip provides strength and other functional aspects of blade geometry.

After a little use, the tip, rather than coming to an aggressive point, ends up being blunted or rounded. This may result from coming in contact with a hard object, or from normal use or improper sharpening.



“Sometimes, the tip of the knife blade is where the cutting or working action begins.”

Another valid and reliable test that gauges the strength of the tip: While grinding the final profile of the blade, I simply stab the tip into the pedestal of my Burr King grinder. If the tip penetrates and slightly sticks in the steel pedestal and does not deform, the tip is probably strong enough for field work. I also like to test the knife tip before it is ready for etching by scribing a light line in a piece of mild steel. I place the tip at such an angle that it is ready to dig into the mild steel, then tap the tang of the blade with a light hammer, engraving a fine line into the mild steel with the tip. If the tip deforms, it is too soft or has been ground too thin. Should the tip break or chip, it probably is too hard. These tests are not as severe as they may sound, but do reliably predict the tip's performance potential.



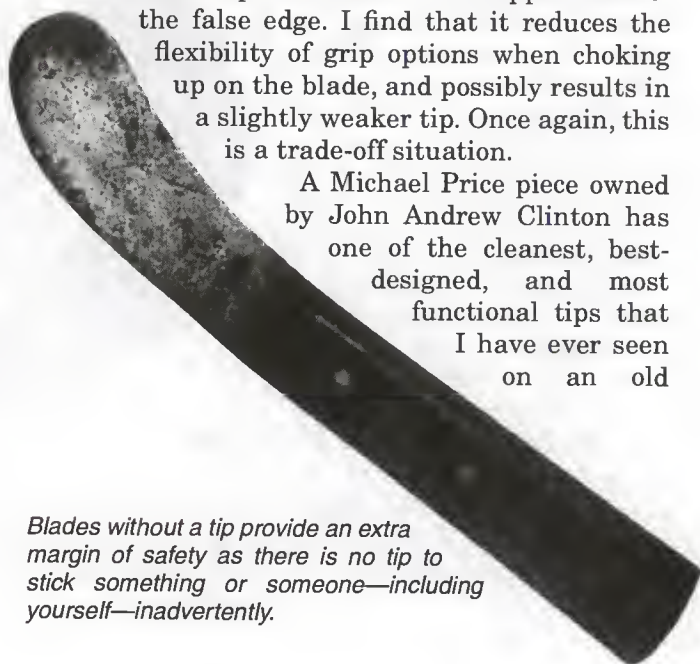
While grinding the final profile of the blade, the author stabs the tip into the pedestal of his Burr King Grinder. If the tip penetrates and slightly sticks in the steel pedestal and does not deform, the tip is probably strong enough for field work.

The False Edge

A rounded blade tip can be corrected easily by simply honing off the rounded part until the cutting edge meets the blade spine at an acute angle. When doing this, be sure to blend the tip into the body of the blade to prevent developing a sharp secondary angle. A tip that flows gracefully to the body of the blade is a more efficient penetrating machine.

A false edge or clip may slightly enhance penetration as opposed to the tip of a blade with a rounded spine. Some like the appearance of the false edge. I find that it reduces the flexibility of grip options when choking up on the blade, and possibly results in a slightly weaker tip. Once again, this is a trade-off situation.

A Michael Price piece owned by John Andrew Clinton has one of the cleanest, best-designed, and most functional tips that I have ever seen on an old



Blades without a tip provide an extra margin of safety as there is no tip to stick something or someone—including yourself—inadvertently.

**“A well-designed
tip can get you
into your work
with style.”**

knife. The slight swelling in the midsection of the blade behind the tip provides strength and other functional aspects of blade geometry. There are many ways to achieve this quality; it is a blend of the temperament of the steel (hardness and temper), nature of the intended task, and personal preference.

Conclusion

The preceding are my thoughts concerning the nature of the tip of the high-performance knife. The tests are simple. The alternatives available to the knifemaker who chooses to seek high-performance tips for his blades provide many hours of experimentation and good, clean knife talk.



A safe method of testing the tip is to hold a sheet of paper in one hand and, with the spine of the blade held toward the paper with the other hand, determine how easily the tip penetrates the paper.

Any maker or client can choose the knife tip he/she wants. I entered into this discussion in the hope of making the choice one that is based on knowledge rather than chance.

Differential Hardening vs. Differential Tempering

The author explains the distinction between the two and the methods he employs for each

There seems to be some confusion concerning the distinction between *differential hardening* and *differential tempering*. First I'll define terms, then I'll discuss my opinion concerning the merits of the two methods of developing a blade of variable hardness. The following discussion applies **only** to 5160 and 52100 steels. Other steels may respond differently.

Definitions

The three main terms to define are *tempering*, *differential tempering*, and *differential hardening*.

1) *Tempering A Blade*: This procedure consists of heating a hardened blade to the desired temperature to make it more resilient to stress.

2) *Differential Tempering*: Starting with a blade that has been fully hardened, the bladesmith heats the spine, or back, of the blade to make it softer than the cutting edge. The object is to provide greater toughness to the blade.

3) *Differential Hardening*: In this procedure, only a part of the blade is hardened, then the entire blade is usually tempered.

Differential Tempering

One method of differential tempering is to heat the spine of the fully hardened blade with a torch until the spine turns blue, carefully allowing a light straw color to run down to the edge, occasionally dipping the edge in water to preserve most of the edge's hardness.

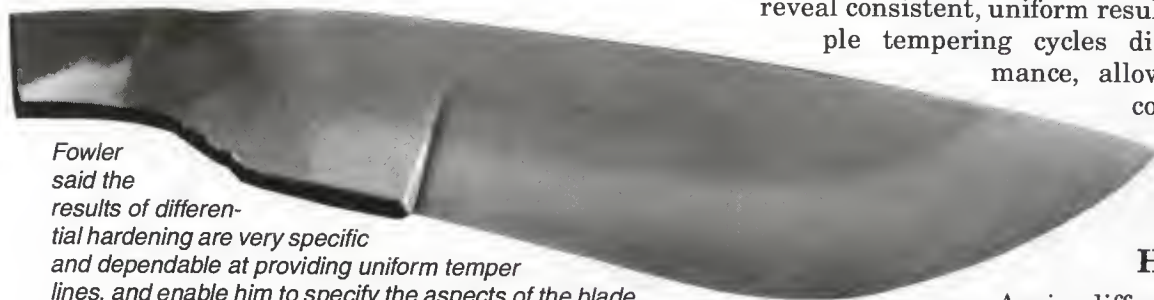
Later, I learned to place the blade edge down into a pan of water and heat the spine while keeping the edge cool. Both methods worked fairly well but they didn't absolutely guarantee consistent results—at least the way I was doing it in my shop. I was unable to fine tune the method to the degree of reliability that I sought. Despite being cooled in water, some edges became too soft and didn't cut as well as they should have; others remained too hard and cracked or chipped when the blade was flexed. I also experienced some problems with tangs remaining too brittle for absolute dependability.

One means of obtaining greater consistency is to fully temper the entire blade either before or after the differential tempering by placing it in an oven for several hours at the appropriate temperature. Again, my testing of these blades didn't reveal consistent, uniform results. However, multiple tempering cycles did improve performance,

allowing the blade to cool to room temperature between tempering cycles.

Differential Hardening

Again, differential hardening is where only a portion of the blade is hardened. The way I do it is using an oxy-acetylene torch to



Fowler said the results of differential hardening are very specific and dependable at providing uniform temper lines, and enable him to specify the aspects of the blade that will be hardened. The temper line here is easily discernible, with the hard area below it and the soft area above it. This particular Fowler blade is 52100.

directly heat only the portion of the blade that I wish to harden to *critical temperature*. (The critical temperature is the temperature where steels become non-magnetic and will harden when quenched. I use Texaco Type "A" quenching oil or a well-qualified equivalent preheated to 165° F before quenching the blade.) By using this method, the spine and tang of the blade are never heated to critical temperature and won't harden when quenched in oil. To ensure that the spine remains soft, only the part of the blade to be hardened is submerged in oil until the entire blade has cooled till it turns black. I then submerge the entire blade in the oil and allow it to cool to room temperature.

The results of this method are very specific and dependable at providing uniform *temper lines*, and enable me to specify the aspects of the blade that will be hardened. After hardening, the entire blade is tempered three times, allowing it to soak at the required temperature for two hours, then cool slowly to room temperature. Next, I cool the blades to 27° F or less for at least 20 hours between tempering cycles. This tempering stage primarily affects only the hardened portion of the blade, as the rest of the blade was never hardened. Nothing is left to chance or guesswork; the hardened areas are completely under my control, as surely as my hammer directs the shape of the blade.

The Desired Results

There are several ways a bladesmith can verify that the tempering operation has achieved the desired results. He can, for instance, run multiple Rockwell tests over the entire surface of the blade. Such tests are time consuming and tedious, and result in a large number of small dents in the blade that have to be ground out.

To positively guarantee that everything has gone as planned, I etch the blades in a solution of one part ferric chloride to two parts water to reveal the true nature of the steel. The soft portion is easily identified, as is the transition zone between the hard and soft areas of the blade. By etching all the blades I make, I receive immediate and obvious feedback as to the quality of my heat-treating methods. There can be no secrets when the etching is

"The object of differential tempering is to provide greater toughness to the blade."

reference blade.

When attempting to read the message told by the etched blade, you must take into account the nature of the steel, for the pattern revealed in a 5160 blade will differ from the pattern in a 52100 blade, as will the pattern revealed in different lots of the same type of steel. The bladesmith is well advised to engage the services of a metallurgical laboratory to verify what he thinks the pattern reveals. While it may seem expensive at the time, if high-performance blades are your passion, the knowledge gained or verified is well worth the expense.

I've never been able to achieve an etched blade that reveals a consistent, uniform transition between hard and soft zones by attempting to harden the whole blade and differentially temper only the spine.

Rockwell tests and photomicrographs of my blades conducted by metallurgist Rex Walter have proved to be consistent with the visible evidence provided by etching the blades. While etching doesn't immediately reveal exact Rockwell predictions, comparative evaluation of the effects of the differential hardening method is

obvious. The patterns revealed by etching the blade tend to parallel and confirm the results predicted by destructive testing in my shop. It works. The bladesmith can evaluate the appropriate level of hardness by testing the cutting edge for toughness and cutting ability in his shop.

I've developed my methods carefully over the past 15 years. There are many other methods used by bladesmiths to harden and temper their blades. Some use clay to absorb heat, others use salt baths. The most critical aspects of a bladesmith's methods are his absolute dedication to the testing of his blades, and quality control to assure consistent results and high performance.

done honestly by the bladesmith for the benefit of developing his own abilities and to reveal all there is to see for the client. The predictability of performance derived from the nature of the pattern must be verified by reference testing the blade's ability to flex and cut. Learning is most effective when you see what you think happened and then compare the blade's performance to a reliable

"To ensure that the spine remains soft, only the part of the blade to be hardened is submerged in oil."

Uncover the Secrets Hidden Beyond the Blade

Through telltale temper lines, a knifemaker learns a great deal about the nature of steel



Ed Fowler forges and etches 52100 blade steel and carefully examines each blade. The resulting pattern from the etching, he says, reveals the full spectrum of the crystalline structure developed in blades. The pattern of the unhardened steel toward the top of the blade provides of point of reference from which the rest of the crystalline structure can be evaluated.



Knifemaker Bill Burke is a protégé of Fowler who also etches his blades in an attempt to search for and eliminate defects. He and Fowler believe that when a blade smith honestly etches his blades as a means of quality control and develops an understanding of what is revealed, he will be able to become more competent in his forging and heat-treating methods. Many times, they say, the pattern of the etch will reveal errors that could easily have been undetected in a polished blade.

The first I recall seeing temper lines on a knife blade was in the late 1970s when fellow knifemaker Bill Moran and I were discussing various attributes of the forged blade. Moran pointed to a temper line on one of his blades and stated, "Collectors like to be able to see a temper line on a forged blade. It is the mark of quality and the ability of the blade smith."

The blade that we were discussing was not etched, but the temper line was clearly visible in the fine-grit finish of the blade. The hardened portion above the cutting edge of the blade reflected light differently than the softer portion. I was a novice to the forged blade and asked as many questions as my limited understanding would allow me to grasp.

Later, as my knifemaking abilities allowed me to delve into the frontiers of damascus steel, I began etching my blades, not in search of the temper line, but to reveal the damascus pattern of the blade. Sometime during my knifemaking endeavors, I etched a 5160 blade that had been differentially hardened and was amazed at the variation of the pattern it revealed in the steel as the hardness progressed from soft spine of the blade through the transition zone, and finally to the hardened area of the blade at the cutting edge.

A discussion concerning the potential value of etching steel with knifemaker Wayne Goddard further convinced me that by etching all blades, the knifemaker could

learn a great deal about the nature of the blades he finished. Goddard had been etching blades for a long time and discussed the many "secrets" hidden in the polished blade that could be revealed by, as he put it, "the telltale etch."

In time, I learned that serious defects in a blade, previously hidden behind the polished surface, became obvious after etching the steel. The previously obscure defects, created while forging or heat-treating, honestly condemned the blade to the scrap pile.

Anytime I failed to provide well-executed hardening cycles to the blade, my errors were obvious, not only to me, but also to anyone else who understood the qualities of a good blade. By etching blades and honestly judging them on their visible merits, I became more proficient both in my forging and heat-treating methods.

As time and my knowledge of the nature of the forged blade progressed, I have developed some refined theories concerning the ability of etched blades to reveal the true nature of the steel. Most importantly, if the blade smith sees and hears the lessons to be learned by the "detective etch," as Goddard says, he will become able to consistently produce blades that push his steel of choice to its upper limits of performance.

At first glance, etching reveals errors, and as you learn to read the pattern revealed by the etch, you come to know the joy of reading the boundless epic of the carefully nurtured blade.

Temper Lines Tell All

I believe that the best blades, as revealed by what is commonly known as etched temper lines, begin with the first heat and develop slowly with each subsequent blow of the hammer and thermal cycle the steel is subjected to throughout the development of the blade.

A recent issue of Scientific American, January 2001, contained an article by Dr. John Verhoven concerning the reproduction of Wootz steel. The pattern in Wootz steel is one of beauty and of a nature all its own. Verhoven and American Bladesmith Society master smith Al Pendarry devoted a great deal of knowledge, time, and energy unlocking the forgotten methods that can be used to develop modern day Wootz steel the old way.

Wootz is a legendary steel first encountered by 11th-century crusaders near the city of Damascus, and has enjoyed centuries of fame as a superior blade steel. Mentioned as early as 326 B.C. in connection with Alexander the Great, this mystical steel was reported to have cut floating silk scarves.



This knife, generously provided by George Cummings for this article, is an outstanding example of one blade smith's highly developed understanding of blade geometry as it relates to his performance goals. The hollow-forged blade—as opposed to ground—provides an extremely light and efficient slashing instrument of cut. Note the dropped handle. When you see a knife with these design qualities, you know the blade smith was well versed in performance. A cutting test on hemp rope, comparing the blade with some of our present best cutting knives, revealed that this blade is an extremely efficient high performance instrument.

While the exact heritage of this knife will forever remain unknown due to the fact that there is no signature or date on the blade, our best guess is that it was made some time between 1840 and 1870, most probably in India. This unsigned well-executed bronze represents the heritage of our blade.

The most interesting and revealing result of their efforts to me was the fact that the Wootz pattern developed gradually throughout the forging of the steel and that if at any time the blade smith overheated the blade above what I call "low temperature forging cycles," the pattern would disappear.

In order to fully develop and maintain the quality of the pattern, it was necessary to subject the blade to 50 low-temp thermal cycles. A natural consequence of the required low temperature forging process is the necessity for more time and energy devoted to the shaping of the blade as opposed to high-temperature forging of the steel.

Their process with Wootz steel corresponds closely to my experiments forging 52100E ball bear-

Al Pendray says he expects knives to be able to cut floating silk scarves as Persian legend depicts, and that, he says, is why he learned to make Wootz steel. The author considers the pattern in Wootz as one of beauty with a nature all its own.



ing steel. The more low-temperature thermal cycles, the better my blades perform in cutting tests, and the more toughness and strength they exhibit.

If during the forging process I allow the temperature of the blade to exceed 1,625 degrees Fahrenheit, the blade will not perform as well as one forged at consistently lower temperatures. In addition, if after the blade is forged, I heat the blade over the top end of the point decalescence, performance quality may suffer.

Hardening the blade naturally requires heating the blade into the hardening temperature, but multiple quenches permit the blade smith to limit the time at critical temperature. It is possible to attain some excellent qualities in an edged tool while forging at high temperature, but when you seek versatile, high-performance quality blades, low-temperature forging seems to be an essential element in the process.

I believe that the qualities that made the Wootz blade so highly valued in its time were the result of the forging process working in concert with the chemical nature of the steel itself. The Wootz pattern was a visible exhibit of devotion to the forging technique used to reach the greatest performance potential of that steel. Simply stated, the Wootz pattern was an inherent assurance of quality.

The production of Wootz blades ceased at one time in history. Several theories exist to explain the demise of Wootz steel. For example, some feel that the ore necessary for the development of the pattern became unavailable.

Where Wootz Went Wrong

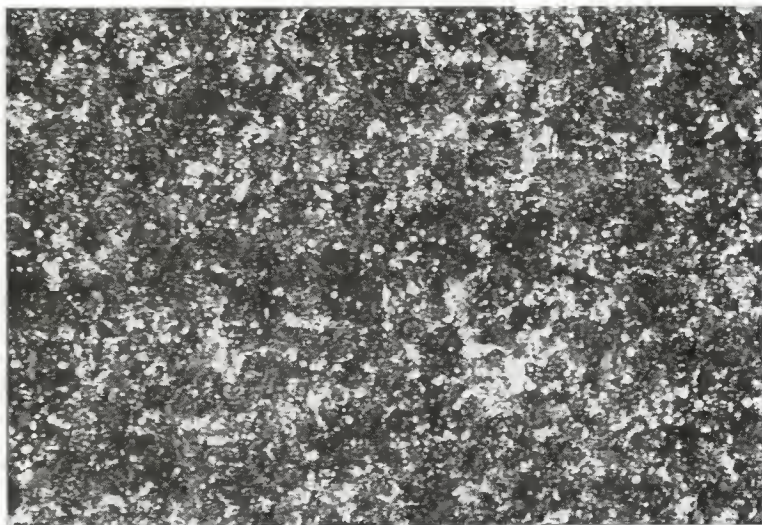
I would suggest the following theory as a possible explanation for the disappearance of the Wootz blade in the armories of the 19th-century arsenal. The demise of Wootz could have been due to a defector from the Wootz clan of blade smiths, using the lessons learned by the Wootz pattern, forging new and possibly better suited steels to produce blades equal or superior to the Wootz blades.

The improved blade would have been readily recognized at the time because there was no smoke-and-mirror salesmanship with knives. Blades were used, depended upon, and had to exhibit high levels of performance or the man, army or country depending upon them was at a distinct disadvantage.

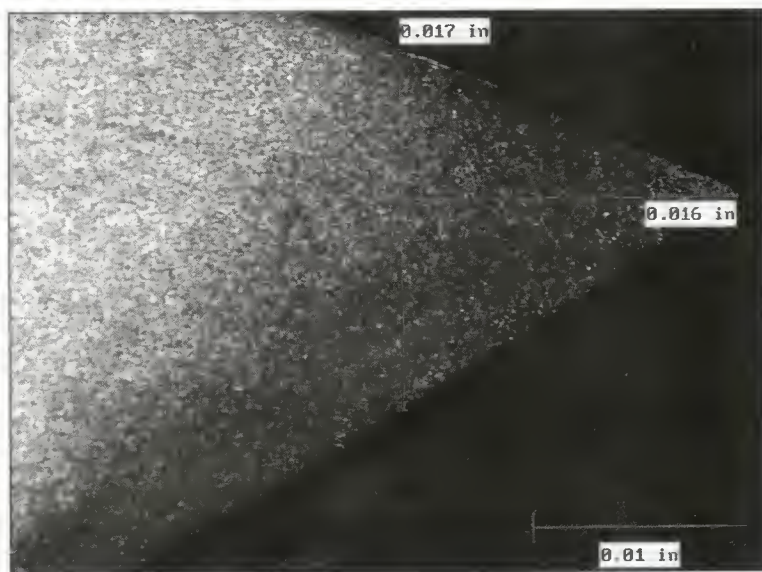
There was one problem with the new blades: once the Wootz pattern was no longer required as testimony to the quality of the blade, blade smiths who were not absolutely devoted to the quality of their product soon learned that they could forge blades at higher temperature more efficiently and turn a greater profit.

The Wootz pattern was no longer present to maintain quality. The science of battle became more sophisticated and firearms replaced edged blades as primary weapons. As the edged implements of battle fell to second place, the demands upon the blade smith and quest for high performance became less stringent.

Slowly, the most important lesson learned by the Wootz pattern was forgotten by the mainstream of men who work steel. A religious Hindu



Metallurgist Rex Walter examined several Ed Fowler blades forged from 52100 steel. The etched blades, he said, exhibited uniform temper lines with the transition zone between the hardened edges and soft backs clearly defined. Examined microscopically at 500x, photomicrographs revealed an extremely uniform grain structure as shown here. The photomicrograph is of an unquenched area of the blade. (Harry R. photo)



Clean steel is important because nonmetallic inclusions can act as stress risers, which tend to propagate micro cracks, according to metallurgist Rex Walter. There are none of these in a magnification of the tip of one of Ed Fowler's 52100 steel blades. (Harry R. photo)

text, as quoted from the Journal of Henry David Thoreau, I believe states the tale rather well. "This never-failing discipline I formerly taught to Veevesawat—and it was handed down from one to another—until at length, in the course of time, the mighty art was lost."

Personally, I do not believe that the art of low-temperature forging and high-performance tools was ever lost. It remained quietly in the individual

blacksmith shops wherein the development of higher performance tools could keep the proprietor, who knew both his clients and the desired task of the steel, well ahead of his competition.

For the large-scale steel industry, high temperature forging of steel was simply a matter of economics. Competition was keen for the dollar and forced the main producers of steel products to utilize the fastest, most inexpensive way to form steel. This meant they had to rely upon high-temperature forging, which is more efficient and good enough for the average client who lets initial price influence his purchase, no matter what the eventual cost.

Since I began writing about low-temperature forging and the multiple quench method of hardening blades, many grandsons and great-great grandsons of blacksmiths have related memories of their ancestors using variations of these methods in their one-man blacksmith shops.

The art of pushing steel to its limit never died thanks to a few individual artists in steel who were devoted to excellence. The economic ethic of the day dictated that they kept their secrets within their family for competition was stiff and they had worked hard for the knowledge they held.

The existence of well-defined, honest, and revealing temper lines in the forged steel blades of today can still reflect upon the skill and dedication of the man who developed the blade from raw steel to a fine-tuned high-performance cutting instrument. Nothing can be hidden from the maker or the client, for the experienced eye can read the nature of the steel like a book.

Temper lines are meaningful only to the specific steel, and the man who knows and fully understands the message they carry. Once the blade smith has developed the methods, temper lines verify the structure.

My understanding of the etched 52100 blade has developed slowly by simply testing and carefully evaluating the desired knife functions manifest in the blade in my unsophisticated shop. Then, by technical evaluation of the metallurgist, our thoughts and the empirical results concur both at the basic tasks of knife performance and the photo micrographic examination. The blade smith provides the art, and the metallurgist explains the science.

Update: Status of the High Performance Knife

A multi-year odyssey yields results with which the author is quite pleased

A little over three years ago, I received a phone call from Rex Walter, a friend I'd never met. Rex works in a metals laboratory in Pennsylvania and had been reading about my interest in 52100 steel. The outfit he worked for was conducting an inventory of the steel in a 225-acre storage yard.

During the inventory he noticed a large quantity of virgin 52100 in the form of 5 1/2-inch-round bars, each 18 feet long, all from the same lot and of high quality. He offered to send me some of the steel that had been forged down to 2 1/2-by-2 1/2-by-14-inch rectangular bars. I agreed to give the

Ed Fowler said he forged the test blade at a low temperature—1,626° F maximum—from a 5 1/2-inch-round bar of virgin 52100 steel supplied by Rex Walter. The Rockwell hardness at the cutting edge is 60 RC and 36 RC on the spine. According to the author, the "Modified Michael Price Grind" contributed to the blade's outstanding performance, all of which he said was made possible by the ultra-fine grain structure—#14 and finer—developed by his forging and heat-treating techniques.



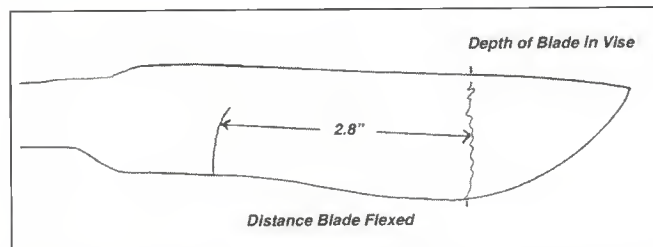
steel a try, and a few weeks later a rather heavy package arrived for me at the post office.

Most folks are very reluctant to change from something that works well. I'm no exception. A few months passed and Rex called me again inquiring how the new steel was working out. I told him that I hadn't had time to work with it. A supreme diplomat, he suggested that I forge a knife from one of my 3-inch ball bearings and one from his steel and that he would do a metallurgical analysis on the results. I agreed and forged some blades. The information Rex obtained from the results was highly revealing and initiated the next generation of high-performance knife. He found great chemical differences existing between blades from one ball bearing to another. At the time I felt that all ball bearings were the same when, in fact, 52100 has been available to the industry since before 1900, and both the nature and quality of the steel varies significantly from one time or steel mill to another.

The phone calls, the package in the mail, and the next three years turned out to be the most significant events in the pursuit of the high-performance knife. Rex, bladesmith Bill Burke, and I conducted many experiments and, slowly, our dreams of our version of Excalibur started to materialize.

Modified Michael Price Grind

Along with the development of knives from the virgin 52100, I'd been working on my interpretation of what I call the "Modified Michael Price Grind." Essentially, the Modified Michael Price Grind is when the convex blade is thinner immediately ahead of the ricasso, thickens toward the front third of the blade, then tapers to the tip. I've found that variations of this blade geometry allow the blade-



The 2.8 inches is the distance of its length that the blade flexed. The vertical line on the blade toward the tip is how deep—about 1 1/2 inches—the blade was inserted into the vise.

smith to utilize the nature of the heat-treated blade to maximum potential by virtue of reducing stress where the greatest amount of stress occurs in a blade during the 90-degree flex test.

This past November, Bill came to my shop and we put one of my most recent 52100 blades to the test. We selected one of five blades I'd forged and subjected it to the edge flex test. For the uninitiated, the edge flex test is where the edge is flexed over a steel rod—in this case a smooth sharpening steel that Rockwells above 62 RC. Upon the first flex, the edge scratched the sharpening steel but flexed as a good edge should. I feel that the ability of the 60 RC edge to scratch the harder steel is due to the uniformly dispersed chromium carbides in the martensitic matrix of the hardened portion of the blade.

I continued to flex the edge first one way then the other a total of 11 times. The edge didn't chip or roll over. There was a time when two edge flexes were considered enough. Bill and I decided

this was an adequate test of edge toughness and continued no further.

I sharpened the blade on my Norton fine India stone and proceeded to initiate the rope-cutting test. Rope cutting is somewhat hard on the wrists, so Bill and I traded off and accomplished a total of 415 cuts on one lay of a 1 1/8-inch-thick hemp rope, using about 2 inches of the blade's cutting edge. At this point the blade started to drag and we decided that it—and we—had done enough. I was able to sharpen the blade to hair-shaving precision using my three-quarter-inch oval Norton fine India stone in a grand total of four seconds. About 20 years ago I can remember when I was glad when a blade could make 20 cuts. Bill and I were extremely pleased with the blade's cutting performance. We knew our blades were doing well but we'd never tested one to such a high level of performance.

Last but not least was the famous 90-degree flex, a test that I feel is the absolute minimum level of performance required for a blade to qualify as a high-performance field knife. Bill and I placed the blade in a vise, inserting about 1 1/2 inches of the tip between two hardwood blocks, and secured it tightly. Using only one hand on the tang, neither of us was able to flex the blade beyond 20 degrees. The blade returned to straight from the flexes. We then added the leverage of a 16-inch bar of square tubing to the tang and flexed the blade to 90 degrees. Bill turned the blade around in the blocks, tightened the

"I'd been working on my version of what I call the 'Modified Michael Price Grind.'"

wise and bent the blade back the other way for the first 180-degree flex. We continued to reverse and flex the blade 180 degrees for a total of 6 1/2 flexes. After the last flex, we examined the blade and could find no evidence of cracks, chips or stress risers (a stress riser is a wrinkle or crease in the steel that usually forms prior to the development of a crack). The blade demonstrated the same exceptional level of resistance to the last 180-degree flex as it did to the first one. The blade flexed uniformly over a distance of less than 3 inches of its length and, after each flex, returned to within 30 degrees of straight on its own.

A functionally balanced blade that can cut this well and still pass the tests which we subjected it to isn't simple to develop. The high-performance blade begins with the nature of the steel and is slowly nurtured throughout its development to the end product. My search started more than 20 years ago, and Bill, Rex, and I still have room to advance the high-performance blade further toward our dreams of Excalibur.

A Team Effort

The outstanding performance by this blade isn't the product of one man but many who shared information and worked directly in the development of the high-performance knife.

"After the last flex, we examined the blade and could find no evidence of cracks, chips or stress risers."

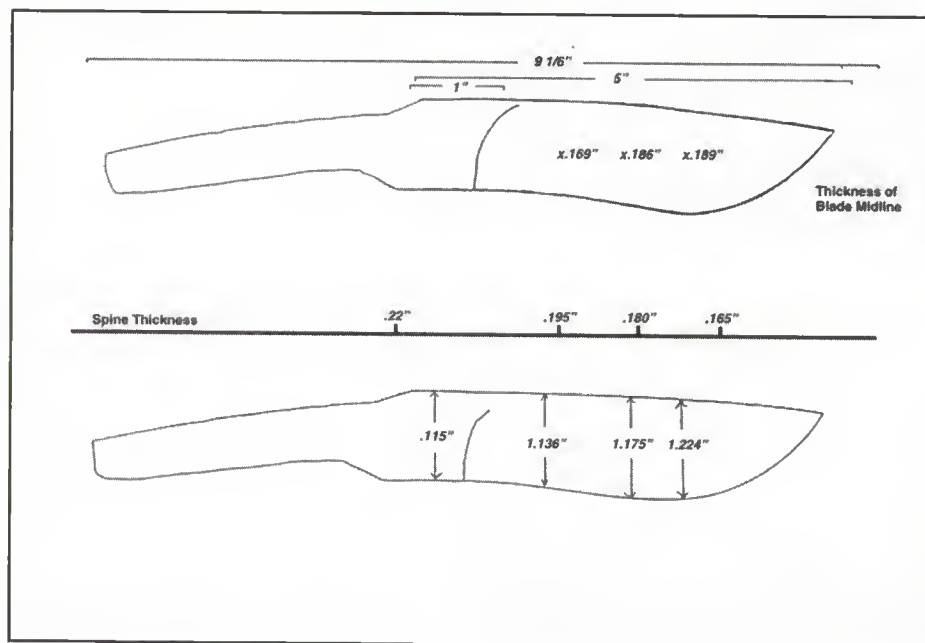
First, I have to thank Rex. He's the man who introduced me to the virtually unlimited high-performance potential of the 52100 available to today's bladesmith. Rex unselfishly supported the experiments of the past three years by putting in extra time in his laboratory evaluating our progress. Rex is tireless when it comes to researching both current and historical experimental liter-

ature. When he felt that our progress could benefit from the empirical information of the industry, he carefully evaluated and translated it to the point where Bill and I could understand and use the information.

There were many who felt that what we were doing violated the principles of sound bladesmithing practices. Rex put the criticisms to rest by providing technical analysis of the blades Bill and I produced. Countless photomicrographs and chemical analysis evaluated every step in the development of the performance potential of the blade we tested, and also explained why many blades failed. This past summer Rex came to the Willow Bow Ranch and for three hot days observed, took notes, and discussed every aspect of our techniques. Bill and I now know the whys and hows of the blades we tested and have plans for future projects thanks to Rex.

The second person who worked tirelessly with me the last three years is Bill. No single man

The dimensions superimposed inside the blade drawing at top refer to the thickness of the blade at each point indicated along the mid-line as a result of what the author calls the Modified Michael Price Grind. The dimensions on the middle dividing line refer to the thickness of the blade spine at each point indicated. The dimensions superimposed inside the blade drawing at bottom refer to the width of the blade at each juncture indicated.



pounding steel could have gained the level of performance that was achieved. He and I talked on the phone three-to-four times a week sharing information and questions that had to be explored. He took the time to backtrack my experiments and suggested modifications. When it was time for us to work together, he made the 400-mile drive from his Salmon, Idaho, home to my shop in Riverton and another weekend of round-the-clock shop time followed. Thanks, Bill.

Third are the many bladesmiths who called to share information concerning methods of their ancestors who knew the benefit of low-temperature forging and the multiple quench. Among those who helped significantly was the late Dick Iiams, who was with me from the first.

**“A blade that can
cut this well and
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develop.”**

Also to be included are the many nameless bladesmiths who, through their knives, have shared information with me from the past. Michael Price needs special mention as a knife from his hand made me consider the complex convex grind I have termed the Modified Michael Price Grind in relation to the 52100 steel used in this project.

Last, but certainly not least, I wish to thank both Bill’s clients and mine, who, through their purchase of our knives, have supported our efforts. Without their support, the advances in the high-performance knife wouldn’t have been possible. Nor would it have been possible without the full support of our families, who stood by us while Bill and I talked and made knives.

Ball Bearing Steel: It Just Keeps on Cutting

*In part one of two, the man who repopularized
52100 chronicles its continuing saga*

Looking back over my bladesmithing efforts with the benefit of hindsight, 52100E—also known in the roller mill industry as the “Cadillac of steels”—should have been my first steel of choice. This is the steel that moves civilization today. Railroads to automobiles, submarines to jet engines, you’ll find 52100 in all of them. Initially produced sometime before 1900, 52100 has been available to the blacksmith as fodder for his forge ever since. It wouldn’t surprise me in the least to learn that the first bearing to wear out soon came to know the bladesmith’s anvil. Knife-makers have used 52100 for years, one of the most notable being the late, great cutler and Blade Magazine Cutlery Hall-Of-Famer, William Scagel.

When I first started forging knives, I knew very little about the nature of the steels with which I was working. At first, I believed that a certain leaf spring from a special year of truck was the ultimate. Then, after finding a few inferior used springs, I tried new 5160 steel accompanied by a technical analysis. I knew I had hit pay dirt because the quality of my knives improved. I found from my work with the used springs that the more forge work I did on a piece of steel, the greater the level of performance I could develop in my finished knives. I ordered 3/8-by-2-inch stock in 6-foot bars and worked the steel as much as possible when shaping my blades.



This is the first blade Wayne Goddard forged from a 2-inch ball bearing that got the author started working with 52100. Collector Scott Pritchard bought the knife and the author later acquired it from him in a “special deal.” The ball bearings are the author’s.

Later, I switched to making knives from used load-control shafts by John Deere. I called the company and a spokesman told me that the shafts were made from "a high-grade" 5160 steel. This was my first exposure to the possibility of varying grades of the same steel. I didn't know enough to investigate further, so I simply accepted the spokesman's statement and enjoyed the benefits of clean, reliable steel. An inch in diameter and a little over two feet long, the shafts provided ample opportunity to work the steel in order to develop what I then considered high levels of performance.

A few knives and a lot of testing convinced me that the high-grade 5160 was the steel of choice. Simply stated at this point for reference, I could push the

blades to what I then considered the high-performance level of 100 cuts on one lay from a 1 1/8-inch hemp rope, followed by a 90-degree flex without the blade cracking.

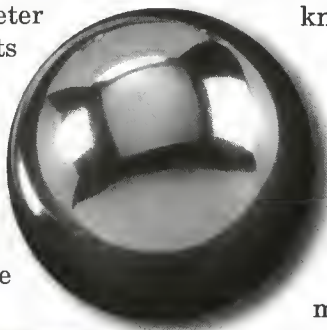
The Awakening

My beliefs concerning the ideal steel were about to change. Wayne Goddard had seen a knife made from a ball bearing and accepted the personal challenge to make a knife from the same material. During a phone conversation, he told me that he was going to forge a single knife using all the steel from a 2-inch ball bearing.

In the spring of 1990, I attended the Oregon Knife Show in Eugene. On my way, I stopped at Wayne's shop to see the knife he had forged from the ball bearing. I was highly impressed with her; she cut well and, in my opinion, she's one of Wayne's nicest knives. I fell in love with her but couldn't afford her at the time. Later, thanks to Scott Pritchard, my friend and a knife collector, I was able to add the Goddard piece to my collection. Scott bought her, knowing that I liked her and wanted her. After Scott enjoyed the knife for a while, he contacted me and offered to make her mine, as she held a special place in the history of 52100 knives. Scott and I made a deal!

**"Wayne Goddard
strongly
encouraged me to
give 52100 a try."**

Meanwhile, Wayne gave me some 2-inch ball bearings and strongly urged me to give 52100 a try. After extensive encouragement from Wayne, I forged a blade from one of the ball bearings. The first piece was tremendously successful thanks to some accidental events that greatly influenced the nature of the blade. I reported my accomplishment to Wayne. In his empirical manner, he said, "Let's see if you can do it again." I figured it would be easy but it took me six months filled with frustration, broken blades, and unanswered questions before I was able to make another knife that would cut and complete the 90-degree flex. The only



*Blade Magazine Cutlery
Hall-Of-Famer William Scagel, the
grandfather of 20th-century
handmade knives, used Timken
roller ball bearings for some of his
blade steel. This rare Scagel piece
with the folding blade in the handle
is from the collection of
Dr. James Lucie. (Lucie photo)*

encouragement I had was from Wayne and from that first blade lying quietly on my workbench that had performed so well. The reason the first success was so hard to duplicate was my failure to keep accurate notes of all environmental and temporal influences that affected the nature of that first blade. I had learned a valuable lesson: When experimenting, write everything down whether it seems significant or not.

The next seven years would be filled with many successes and failures, and a lot of learning. Things just didn't go as planned all the time. I felt the failures were my fault, so I did a lot of fine-tuning of my methods. I learned that 52100 required liberal amounts of "tincture of time." I couldn't hurry the operation by forging at high temperatures, 1,625°F being the upper limit. Twenty-four-hour intervals were required between individual hardening and tempering operations, neither of

**"At first, I believed
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which could be rushed. When I tried a short cut, a poor blade resulted. Still, despite my methods, every now and then some new, unpredictable variable would influence the blade. Quality control dictated the sacrifice of one blade from each ball bearing to destructive testing. During this time I learned that I could obtain higher levels of performance by starting with 3-inch ball bearings

instead of the 2-inch bearings due to the advantage afforded by starting with larger stock and the greater amount of reduction by forging required.

Next: The author reviews the research and laboratory work performed on 52100, the results on the finished product, and why the ball-bearing steel is so conducive to making high-performance knives.

Ball-Bearing Steel It Just Keeps On Cutting

In the conclusion, the author discusses how he's grown with 52100 as a knifemaker and why it's so important to the high-performance blade

By Ed Fowler,
as reviewed by Rex Walter

Knifemaker Maurice King of Eugene, Ore., forged this knife from a bearing race in the 1960s after being told by other makers that it was impossible to make a knife from a bearing. King gave the knife to the author at the Oregon Knife Show several years ago.



Editor's note: In part one, the author reviewed how he first started making knives from 52100 steel and how his knives evolved from that point forward. This time, he outlines how he, Rex Walter, and Bill Burke have taken 52100 to new heights of performance, and hope to take it even higher.

The next significant event in the development of the high-performance knife came the day Rex Walter called. He told me that he had some virgin 52100 in 5 1/2-to-6-inch round bars, each 18 feet long—140,000 pounds of the steel and all from the same melt. He was willing to forge it down to a size I could shape with my 150-pound Beaudry power hammer. I agreed, with the usual reluctance of a man set in his ways. Rex strongly encouraged me to work with his virgin 52100, then supported my efforts with the technology of his laboratory and his knowledge. Suddenly, I had an extremely uniform, defect-free, predictable, and reliable steel with which to work. Rex performed a great deal of laboratory work and our dreams of high-performance knives advanced significantly. Furthermore, Bill Burke, the blade-

“Rex Walter found large discrepancies in the chemistries between individual ball bearings.”

“The quality of today’s bearing steels has very possibly outgrown the rating systems that evaluate them.”

—Rex Walter

smith from Salmon, Idaho, enthusiastically assisted our development of 52100 for knives.

Rex analyzed many knives from my used 3-inch ball bearings and was able to provide valuable insight into the challenges I was having with quality control. He found large discrepancies in the chemistries existing between individual ball bearings. The reason for the discrepancies was that the bearings could have come from many different sources and times. I had no way of predicting the exact nature of the steel, which explained some of the unknown variables.

Another fact that came to light was that nothing good can happen to a piece of steel being used. Stress is detrimental to the integrity of steel. Micro-faults can form that are undetectable to the eye and that can—and did—cause some unexplainable failures in my test blades. The time I invested using old ball bearings was not wasted because I learned a great deal, and the result was many high-quality blades. Needless to say, I’m eternally grateful to Rex and the insight he provided.

Evolving 52100

The nature of 52100 has changed drastically since that first bearing was made more than 100 years ago. Bearings are performance oriented, and those that last and gain a reputation for high performance are in demand. Every bearing is, by nature of its job description, routinely tested to its limit of performance. Competition is based solidly upon quality steel, and the outfit that makes the best steel enjoys a ready market for its product. Quality control is a high priority in the manufacture of bearing steel.

In 1942, the ASTM (American Society for Testing and Materials) issued its first specifications dealing with bearing steels. Among them: “There are now seven ASTM specifications dealing with bearing materials ... These are living documents, under constant review and among the most demanding specifications.” Massive amounts of research have been devoted solely to bearing

The Road Map to 52100

Bearing Steels into the 21st Century is a compilation of articles presented at a conference of the same name. To support its theme, each article is accompanied by a list of references. This is the book to start your journey into the frontiers of bearing steels and every cutlery enthusiast’s companion, lady knife. It’s edited by Joseph C. Hoo and Willard B. Green Jr., ASTM Stock No. STP: 1327. The ASTM (American Society for Testing and Materials) also can provide extensive research documents. Contact it at 100 Bar Harbor Dr., West Conshohocken, PA 19428-2959 and ask for a list of publications. Another excellent reference is *The Making, Shaping and Treating of Steel* from The Association of Iron and Steel Engineers (ISBN 0-930767-00-4). It’s a big, comprehensive book that will provide more ideas for knifemakers than one has time to investigate.

—By Ed Fowler

steels. Industry has studied the attributes of bearing steels extensively. It has found that clean steel with the right chemistry supported by knowledgeable study and which has been carefully nurtured

“52100 is easy to work, grind and heat treat.”

is the key to bearing life. As Rex noted, “The quality of the bearing steels supported by keen competition in the industry and the quality of today’s steels has very possibly outgrown the rating systems that evaluate them.”

Why 52100?

The ball-bearing steel 52100 is available in sizes that permit significant amounts of stock reduction. The amount of stock reduction (mass), I feel, is a significant contributing factor to the high-performance knife—providing the bladesmith does nothing to detract from the performance potential of the steel.

In addition to everything else, 52100 is easy to work, grind, and heat treat. Even less than perfect heat treatment can result in a good knife, though it never should be said that bladesmiths should settle for simply "good enough." As the knifemaker's skills develop, the performance potential of the steel will offer ample room for growth.

The high chrome content of 52100 promotes a beautiful mirror polish and enhances the steel's machinability. The 1 percent carbon is more than can go into solution in the steel. However, unlike 1095, which has about the same amount of carbon, the excess carbon in 52100 also has 1.5 percent chrome to react with to make chromium carbides that can enhance cutting performance.

The "Cadillac of steels," 52100 has been and continues to be one of the cleanest blade materials suitable for cutlery. Its primary use demands great care in manufacture. It's also extremely versatile. For example, I'm aware of one man who makes

**"52100 has been
and continues to
be one of the
cleanest steels
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cutlery."**

frizzens for flintlock rifles from 52100; the frizzens are beautiful and throw a good spark.

The careful craftsman using nothing more than a basic forge set-up and a gallon of the proper quenching oil can achieve great results with 52100. Bill and I have found Texaco Type "A" quenching oil or its equivalent the most appropriate.

In conclusion, 52100 offers an unlimited opportunity for the bladesmith who wishes to experiment. Thousands of variables exist that have yet to be explored by the bladesmith; all the smith has to do is dream.

Author's note: You can obtain more research concerning bearing steels than you will have time to read at your local library, including Bearing Steels into the 21st Century. The book contains hundreds of references to specialized aspects of bearing steels. It's the road map for exploring 52100.

High Performance—52100: How to Forge It and Why It Works

Fowler examines low-temperature forging, grain growth and refinement, numerous thermal cycles and more

The steel that produced the blade in my story, "Update: Status of the High-Performance Knife" in *BLADE®* is 52100. The following is a discussion of the methods of developing 52100 that the late Dick Iiams, Rex Walter, Bill Burke, Doc Dougherty, and yours truly have partic-

ipated in developing over all or parts of the past 20 years. This discussion is not presented as an attempt to dictate to others how to forge knives, but rather a description of how we've produced knives that we consider high-performance pieces for field use. Please note that the events described



After forging the 52100 to a billet measuring 2x1x18 inches, all the hammer blows are to the area of the blade that will become the cutting edge.

52100 Blade Chemistry

C	1.02
Mn	.31
S	.016
P	.013
Si	.28
Cr	1.48
Ni	.12
Mo	.04
Cu	.15
Al	.036
V	.003
Sn	.009

**These percentages are for the 52100 used in the story. Other 52100 steels may vary in nature. The element key: C (carbon), Mn (manganese), S (sulphur), P (phosphorous), Si (silicon), Cr (chromium), N (nickel), Mo (molybdenum), Cu (copper), Al (aluminum), V (vanadium), Sn (tin).*

herein are documented using steel from a single batch of 52100 with the chemistry outlined in the accompanying chart. Slight, sometimes immeasurable, differences can vary the nature of the steel, so steel from other lots may require slight modifications in the bladesmith's procedures.

The Process

Rex starts with 5 1/2-to-6-inch round bars of virgin 52100 steel, each 18 feet long. These are cut to 5-inch lengths and then forged down by Doc Dougherty, a veteran at forging steel, to 2 1/2-by-2 1/2-by 14-inch bars using a 20-ton Chambersburg air hammer. All the steel we've worked with in the past three years is from the same melt.

Rex sends the steel bars to me. I forge them down to 2-by-1-by-18-inch bars using my 150-pound Beaudry hammer. All the forge work is accomplished at temperatures not exceeding 1,625°F, which is known as *low-temperature forging*. One way to tell if you're forging at this temperature is if little or no scale forms on the outside of the billet. When heavy scale comes off the steel during forging, you've probably exceeded 1,750°F and are very close to the temperature where grain growth can occur. *Grain growth* can negate the



Slag flakes surround the dies on the author's power hammer. The small size of the flakes is indicative of low-temperature forging. Larger flakes form at forging temperatures over 1,625°F.

potential benefits of the forging process to the finished knife. I work the steel until it quits moving readily under my hammer, then reheat again to forging temperature and continue forging. Simply stated, "When the steel quits moving, quit hitting."

Both my Beaudry 150-pound and 50-pound Little Giant hammers are fitted with *flat dies*. I use flat dies to allow me to work the steel as much as possible, using many more hammer blows than would be necessary or possible using *drawing dies*. If the blade receives any benefits from forging, it stands to reason that the greater the degree of forging, the greater the potential performance qualities of the finished piece.

Grain growth is a function of time and temperature. A few seconds at high temperature is not nearly as harmful to the potential blade as would be the effect of 10 minutes at the same temperature. When a blade is accidentally overheated, the effects can be partially overcome by simply quenching the blade in cool quenching oil to a black heat (a black heat is when all the red color is out of the blade), reheating to critical temperature, and quenching again. We find it best to tend

"Grain growth can negate the potential benefits of the forging process."

blades in the fire closely and avoid overheating.

I strongly believe that the high-performance potential of the forged blade is primarily due to and obtainable through low-temperature forging and numerous thermal cycles. Industry, in the interest of economics, necessarily forges steel at higher forging temperatures that don't support grain refinement to the extent that can

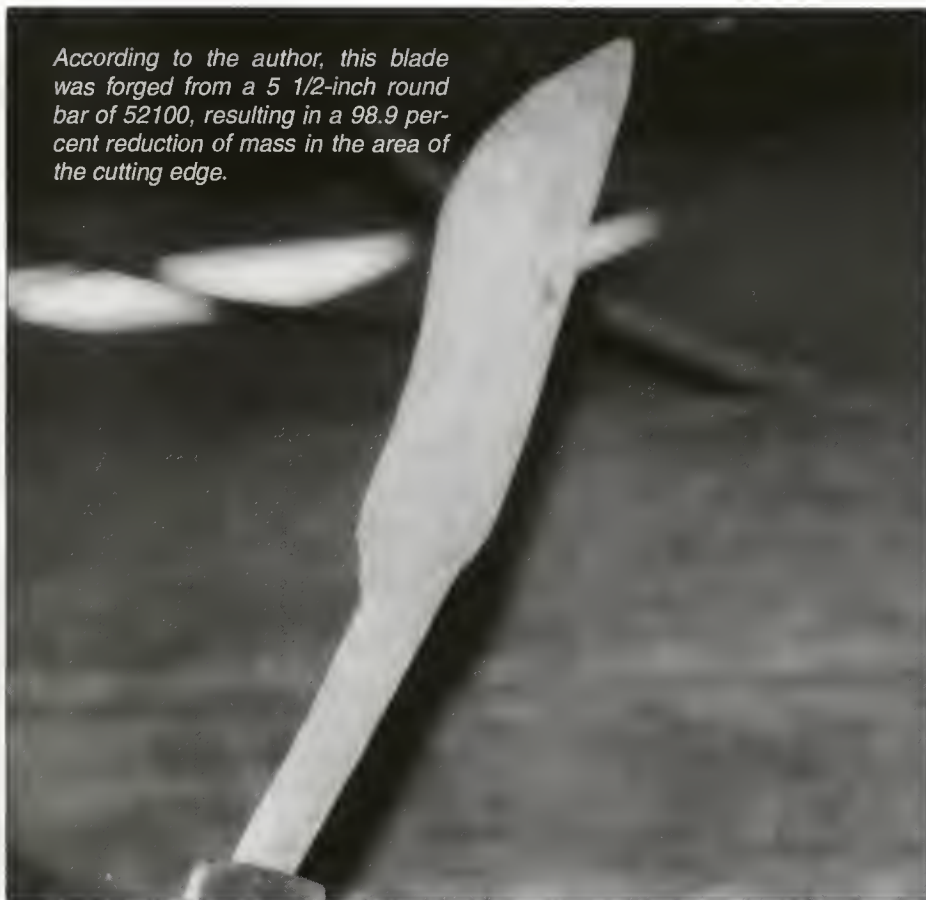
be achieved through low-temperature forging.

Next, I forge the smaller billets of steel into blades using my 50-pound Little Giant and hand-held hammers. Once the steel is forged to the 2-by-1-by-18-inch billets, all shaping of the blade is accomplished by hammer blows on the sides and in the area that's to become the cutting edge, working the steel that surrounds what will be the cutting edge as much as possible. The benefits of this manner of working the steel have been validated by photo microphotographs that reveal a grain size of 7 to 8 in the spine of the blade and a finer grain size, 10 to 11, in the lower third of the blade before hardening and tempering. This difference in grain size is the direct result of the increased amount of forging in the lower third of the blade. The signifi-



This blade has been heated in the forge to a temperature just above the non-magnetic phase of its 52100 steel.

According to the author, this blade was forged from a 5 1/2-inch round bar of 52100, resulting in a 98.9 percent reduction of mass in the area of the cutting edge.



cance of grain size is widely recognized by such authorities as Dr. Jouko I. Leinonen, who wrote: "The strength and toughness properties of a steel can be improved by reducing grain size in the microstructure" (from "Processing Steel for Higher Strength" in the November 2001 issue of *Advanced Metals and Processes*).

Toward the final forging process, I heat the blade to just over *critical temperature* (the temperature range where the steel becomes non-magnetic) and quench in cool Texaco Type "A" quenching fluid to a black color, repeating the process at least three times. I believe that such thermal cycles promote grain refinement.

After I forge the blade to its final desired shape, I heat it to over critical temperature, then hold it in a darkened area and observe the color of the blade as it cools. The blade will be bright red, will slowly turn to a darker red color, then brighten again to a color almost as bright as it was at first. This is an *allotropic phase change* known as the *cycle down through critical temperature*. The blade will become magnetic through this cycle. I then immediately reheat the blade and watch the down cycle of color again. I call these events the *blade-*

smith's normalizing cycle. Then, for the third time, I reheat the blade to above critical temperature and place it edge up in an aluminum cooling rack, and allow it to cool to room temperature. This final thermal cycle is known as *normalizing*.

Steels such as 5160 and 52100 can and do air harden. Therefore, the normalized blade needs to be *annealed*. I feel that it's extremely important to keep the annealing temperature below critical temperature. Any time the blade is at critical temperature or higher, the potential for growing the grain of the steel is likely. In forging blades for high-performance field knives, there's no benefit to the blade by exposing it to higher temperatures. I place forged blades in my Paragon oven, set the heat to 1,100°F, hold that temperature for two hours, and let the blades

cool to room temperature in the oven. All told, this thermal cycle requires nine hours. I place the blades in my household freezer overnight, then repeat the annealing process for a total of three thermal cycles. This step varies from the textbook annealing process that requires higher temperatures. I use the lower-temperature annealing cycle to avoid grain growth and help relieve internal stress in the steel that can lead to warping in the heat-treat cycle. The thermal cycles also help refine the microstructure.

Key Aspects

The significant aspects of our forging process are:

1) The thermal mechanical manipulation (forging) of the 5 1/2-inch round bars to knife blades approximately 5/32-inch thick results in a 98.9 percent reduction of mass in the area of the cutting edge.

This high degree of reduction by forging can provide a very significant feature of the finished blade, as long as the entire forging process is done at temperatures that don't promote grain growth. The manner in which the blades are forged will

result in a grain size of 10 to 11 in the area of the cutting edge and 7 to 8 at the spine before hardening. The difference in grain size in conjunction with edge hardening is what leads to a tough spine and hard cutting edge. The grain size will refine further during the subsequent hardening cycles. Photo micrographic analysis reveals a grain size of 14 and finer in the hardened portion of our test blades; and

2) We also believe that the combination of forging and numerous thermal cycles combines to provide blades that can produce high-performance characteristics.

Chemical analysis of finished blades forged by this process reveals no measurable carbon loss compared to that of the parent stock. All steel has a specific performance potential. The objective of bladesmiths is to do everything they can to achieve the performance potential of the steel. If bladesmiths do everything right and nothing wrong, that potential can be achieved.

“It’s extremely important to keep the annealing temperature below critical temperature.”

We’ve found no shortcuts that would allow us to make high-performance knives at a faster rate. I believe the true art of the bladesmith is in the steel. This art requires knowledgeable care, planning, liberal amounts of “tincture of time,” and elbow grease. Unfortunately, it’s an art that cannot be seen outside the metallurgical laboratory, but definitely will be appreciated by the man who knows the need of a knife on

which he can count.

Author’s note: The information in the preceding was developed over a period of three intensive years of work and study, and is the product of a team—Rex Walter and Doc Dougherty from the steel industry, and Bill Burke and me from the realm of bladesmiths. No one man could have developed the information alone. My thanks goes to Walter, Dougherty, and Burke. More specific information on forging 52100 blades is included in chapter three of my book, Knife Talk, available from Krause Publications (800) 258-0929 www.krausebooks.com

Chapter 4



For the spirit of this, see page 171 (The Long Voyage Home).

Legends

It happens, once in a great while, that a knife somehow becomes more than the sum of its parts. Some knives reach the status of legend when they play a special role in history such as the Ames Rifleman's Knife. She was conceived to meet a need and qualified she was. She was all her kind of lady needed to be. Her moment in the sun was shaded when she met the shackles of tradition and military bureaucracy. She survives today as one of the most sought after official military knives.

The legends that surround the Bowie Knife stem from the nature of one man, very probably a great man. The legend of James Bowie was assured when he stood with other heroes of the American frontier at the Alamo. We share his time through our appreciation of his lady, the Iron Mistress. With each generation, the legend of the Bowie grows, thanks to poets such as Paul Wellman who brought his talents to blend legend and history to a keen edge. The legend of the Bowie comes near to joining Excalibur in greatness. Legends grow. They become larger than they were.

Another quality of legends is that they inspire those they touch. Paul Burke, William Scagel, Ben Lilly, Michael Price, Elmer Keith, and Bernard Sparks have all earned their place of honor in the world of knives. Each knew what a knife needed to be and enjoyed their time with knives and knife makers.

One quality may dictate the nature of the legend, the simplicity, and time of the Marbles Woodcraft knife that holds a special place in the hearts of many. She was an honest knife and will not be forgotten.

The knife holds a special place in the evolution of man. She is the legend of all time: lady knife in her countless forms and materials, who has shared time with man always.

Good Samaritan of Steel

*Whether the ABS or individual knifemakers,
Paul Burke supported them all to the hilt*

I strongly believe that if a man knows one true friend in his lifetime, he has experienced one of the greatest comforts life has to offer. Paul Burke was a true friend to the world of knives. He knew well the knife as art, deeply researched the blade as a tool of man, and was genuine in his concern for all individuals who shared time with knives.

Many times people get lost in the technical and logistical aspects of knives. Paul was a constant reminder that the center and most important aspect of any organization—including the world of knives—is the human factor. He was a living prayer to all who knew him. His unselfish and total dedication to the people and, along with them, the promotion and development of the forged blade, as well as all knives, is unequalled and can never be replaced.

His enthusiasm knew no bounds. Many times he would ask me to accompany him to an individual's table or manufacturer's booth at the BLADE Show, commenting on the contribution the exhibitor had to offer. At times I could not understand the nature of Paul's excitement. Then, as time passed, he would send me some written material or suggest that I review a book, and I would come to appreciate the sunrise he had observed.

I met Paul when he bought the first knife I sold at my first BLADE Show. This memory remains as a significant highlight in my knifemaking career. Paul was genuinely interested in my knives and asked many questions, some of which I am still trying to answer. I have heard the same comment from many other knifemakers. Should the maker himself fail to grasp the significance of Paul's thoughts, Paul would talk to others at the maker's table and coach them on how to guide the maker's talents toward a better knife. Without a doubt, I feel that many of us makers owe a large part of



One side of Paul Burke that some may not have appreciated was his sense of humor. An example was the time he spied his grandchildren riding their bicycles without wearing their helmets. "Hey kids," he said to the youngsters, a twinkle in his eye, "those bicycles are dangerous. Let's go out in the backyard and throw knives instead." Born May 12, 1933, Paul passed away on Nov. 21, 1999. He was 66.

what we are or are going to be to his genuine interest, encouragement, and inspiration.

I now know that the first knife Paul bought from me was not a great knife, and many times I offered him the pick of my table to replace it. He always refused, claiming that he genuinely liked that first knife. And I believe that he did, not necessarily for what it was, but for the direction in which it pointed.

Without a doubt, Paul was highly intelligent, well read, most friendly, and genuinely concerned



Paul Burke was a benefactor of new and up-and-coming knifemakers of both forged and stock-removal pieces, and liked to buy the first knives they ever sold at shows. This elegant short sword is by a young and talented maker in his own right, Anders Hogstrom. His address: Dept. BL5, 2130 Valerga Dr., #8, Belmont, CA 94002 (650) 592-2989. (Slobodian photo)

for all men. Whenever a name was mentioned, he realistically gave that person all the credit he deserved, emphasizing the person's strong points. And I never heard him degrade any individual. He could converse with his fellow man at any level and, no matter how great the differences in your point of view, you left with a smile on your face and a greater understanding of the issues.

I saved every letter Paul wrote me. Looking back over them, I am amazed not only by his complete understanding but his gentle manner of guiding my direction. Before he passed on, he sent me several articles. His cover letter stated: "I am sure that you read these when they were first published, but felt you would like to review them again." The articles were first published in 1976. I had not read them. As a result of the five printed

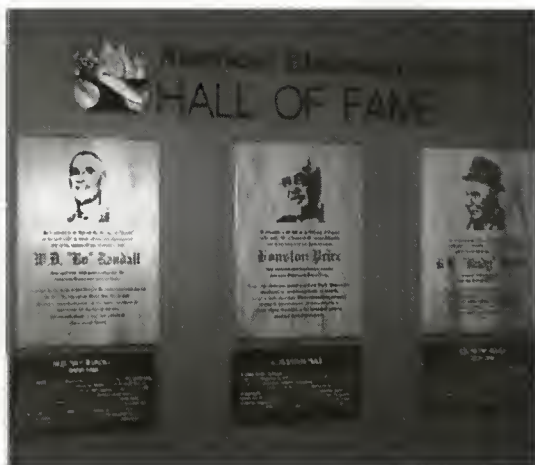
pages he sent me, I have read six books and ordered three more. Through this reading alone, I have shared enough thoughts about knives and the people who used them centuries ago to fill my stories in the pages of **BLADE®** for years, and I have developed a much deeper understanding of knives and people from another era.

**"I met Paul when
he bought the first
knife I sold at my
first BLADE
Show."**

Opportunity Highway

When those around him failed, faced adversity or suffered tragedy, large or small, Paul was not only there for support, he had the ability to understand the situation, communicate realistic options, and lead an individual or an organization through the hard times. What was at first considered a tragedy, soon, through the understanding of Paul, became a broad spectrum of accomplishment and opportunity. Largely as a result of his genuine interest and inspiration, many of us knifemakers have a highway paved with opportunity to continue our quest for the best knife we can make. Newcomers to the forged blade have immediate access to more knowledge and information than ever has been available before, thanks to Paul's efforts in helping the American Bladesmith Society to develop.

Jay and Nancy Hendrickson, leaders in the ABS, had the following to say about Paul: "Paul Burke contributed tremendously to the development of the American Bladesmith Society as we know it today. Paul always had something on his mind to improve the image of the ABS, and the development of new programs and projects. Besides the thousands of dollars of free legal counsel that Paul generously provided to the ABS over the last 20 years, it was his determination and perseverance that secured the educational tax-exempt status for the ABS. As a member of the ABS board of directors, his advice was always taken very seri-



Without Paul Burke's legal guidance, such institutions as the Bill Moran School of Bladesmithing and the American Bladesmith Society Hall Of Fame would not be the vibrant entities that they are today.



"Paul Burke was a wonderful friend, donated all his time and never charged (the ABS) a penny" for his legal counsel, said Bill Moran, ABS chairman emeritus. "He never gave us a bad piece of advice."

ously and appreciated by the other board members. He was always thinking about people and what he could do for them. He was a very unselfish person who truly cared for his fellow man. Paul was really a peach of a guy and a friend to anyone who knew him. The ABS has lost a good man.

"Paul loved the outdoors, particularly hunting pheasants with his dogs. He was an avid collector of knives from an early age. He collected all kinds of knives but took a special interest in hand-forged blades made by new knifemakers. He always offered them an encouraging word and very often added one of their knives to his collection. His enthusiasm was infectious to those who knew him. We will miss Paul's quick wit, his laughter, his guidance, and his friendship."

Paul provided the ABS with the most highly competent legal counsel any organization could hope to have. His genuine interest in promoting the forged blade was one of the ABS's greatest assets. Without his counsel—both legal and personal—I seriously doubt that the ABS would enjoy the vitality it now does. Paul's skillful and tireless efforts laid the foundation for an organization that will endure, an organization that will provide future newcomers with a much greater understanding of the forged blade by simply sharing information free from the restraints of poor organizational structure.

"Paul asked many questions, some of which I am still trying to answer."

"He was a wonderful friend, donated all his time and never charged us a penny," said Bill Moran, ABS chairman emeritus. "He never gave us a bad piece of advice."

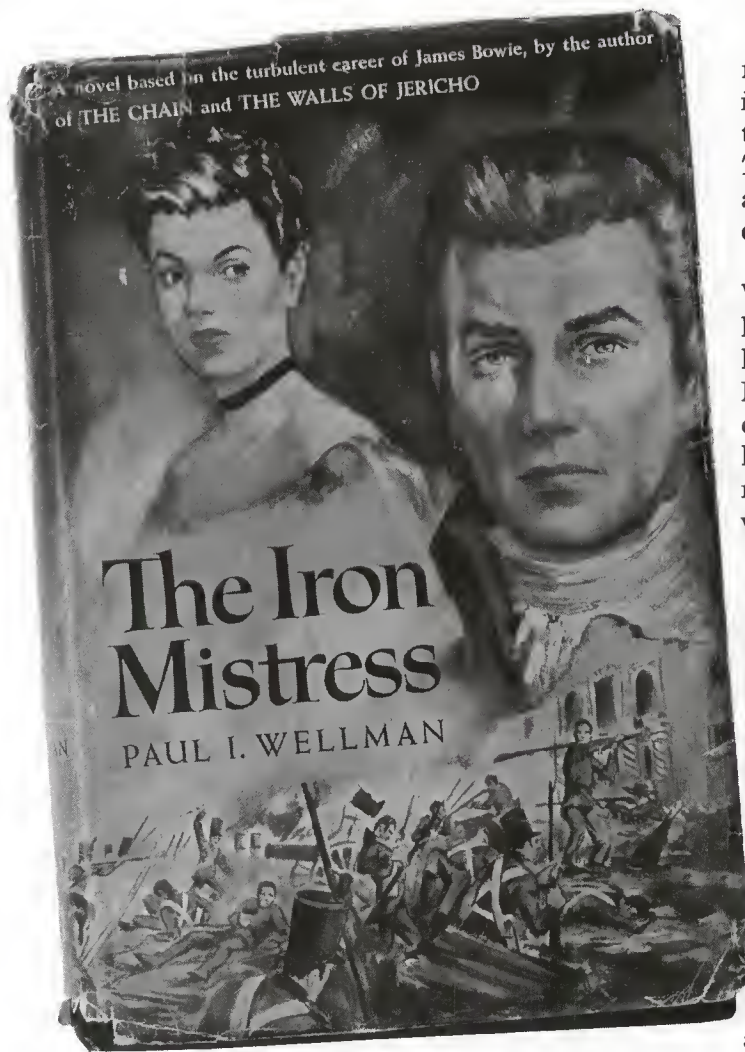
Paul would not allow a trespass or error without calling it to your attention, nor would he ever hold what transpired against you. At your next meeting he would carry the load, welcome your companionship, and inspire your efforts to do your best. Many times he would simply ask a question that I superficially had an immediate answer for, then for days, weeks, months, and, in one case, years, the thought would roll around in my head like an out-of-balance wheel and I would suddenly understand what he was asking. My energies would take a new direction.

Paul's wife, Edie, not only shared Paul's enthusiasm with knives, she shared him with the knife community. The great many hours Paul donated to the world of knives was with her blessing. Without Edie's unconditional support, Paul never would have been able to contribute to the level he achieved. They made a perfect couple in the world of knives.

Paul left way too soon, though he leaves the knifemaking culture a better place. His legacy is true friendship, honesty, and absolute devotion to all the people of the world of knives. Should each of us in the knife community do our part and follow his example, ours will remain a better place.

Our Fair Lady of Steel

The author revisits 'The Iron Mistress' 50 years after its publication



Paul Wellman's book, *The Iron Mistress*, may have influenced knifemakers and knife collectors more than any other literary work.

My first-edition copy of *The Iron Mistress* by Paul Wellman contains the publication date of 1951. Fifty years later, Wellman's *Iron Mistress* still reigns over her kingdom in the world of knives. Recently, I decided to read the novel again, this time to explore the legend of *The Iron Mistress* and somehow explain what it is about her that continues to inspire so many dreams and visions among her followers.

The book's hero is Jim Bowie but, thanks to Wellman's development of the "leading lady"—the knife known as the Iron Mistress—"she" and her leading man together cast a much longer shadow. Many knifemakers and patriots entered the world of knives inspired by her legend. I, for one, fell in love with her at an early age, when the movie starring Alan Ladd as Bowie came to town. After watching Ladd throw the Iron Mistress into a river in the movie's final scene, I planned to visit that river equipped with fins and snorkel to rescue the knife from her watery grave. That was my dream for years. While I thought of her, I made knives, visions of James Black at his forge dancing in my head, with my own Iron Mistress coming to life in my hands serving as my guide.

50 Years Later

What is it about the Iron Mistress that, 50 years later, still stands so regal in legend, history, and today's world of knives?

Surely the fact that the knife was paired with the legendary Jim Bowie had something to do with her fame, but there's more. Wellman was a master of the written word and of developing a plot that would prove timeless. I doubt that the bowie knife would be as popular today without the benefit of the novel from his hand.

**“I doubt that the
bowie would be as
popular today
without the
benefit of the
novel.”**



*The story of James Black and the origin of the bowie knife received additional impetus with the 1951 publication of Paul I. Wellman's novel, *The Iron Mistress*, which became a Warner Bros. motion picture starring Alan Ladd. Here is a scene from the movie with David Wolfe who portrayed Black hammering hot steel. (Photo courtesy J.R. Edmondson)*

Wellman chose well when he included the word *mistress* in the book's title. *Mistress* christened “our fair lady”—Bowie's knife—and Wellman opened the door for all men who dream of the perfect companion to hunger for the legend as he slowly and carefully nurtured her through the written word.

What is a mistress? Each man who reads the title will have his own visions. To me she is a companion who has the will, ability, and dedication to live fully in the present that she shares with her man. My Iron Mistress would be faithful with me always, sharing in the challenges, opportunities, and absolute joy of just being together. She would not worry, complain, or criticize. She would accept my weaknesses and forgive my abuse as soon as she left the whetstone, not blaming me for the

stress of the task we shared. We would age gracefully together as time and task left their mark through which we increasingly would become one. Her successes would be mine and mine hers. No jealousy, no hate, just lives shared to the fullest. She would be a lady whom I could nurture and serve with all my heart. Neither she nor I would ever let the other down.

The dream of my Iron Mistress begins with the title of the book. As I read the book again and again, I note that Wellman describes the Iron Mistress and her interactions with men much the same as other authors describe leading ladies. She's lovely always and a lady in every way. An excellent choice of words, Mr. Wellman, for a mistress she is!

As I read the book, I eagerly anticipated the birth of the first bowie knife. She was not an idle happening; she was carefully nurtured through the character of Jim Bowie, an honest man pursued by evil—ready, willing, and able to dispatch the villains with righteous intent and deadly ability. Bowie's thoughts concerning the dueling code were, “It may be a man's duty to answer a challenge but I don't consider it a duty to send one.” What more can we ask for in a hero to be the companion of our fair lady?

Malot's Museum Of Blades

In chapter six of *The Iron Mistress*, our fair lady becomes a glint in the reader's eye when Bowie meets Malot, a master of edged weapons. Malot takes Bowie to his museum of blades. Bowie examines every piece with a critical eye, and from his experience comments on the special abilities of each one. Our fair lady, the Iron Mistress, seems to have been conceived through a combination of the attributes of a Scottish dirk and a two-handed *falchion* of the Crusades. (Editor's note: According to *A Glossary of the Construction, Decoration and Use of Arms and Armor* by George Cameron Stone, a

falchion, or fauchon, "is usually represented with a broad curved blade widest near the point, and in which the back joins the edge in a concave curve"—not unlike a large bowie knife.)

Wellman described the falchion as having a slot through which a "steel apple" rolled. When the falchion was lifted, the steel apple rolled to the guard, reducing the perceived weight of the blade. "When the blade was swung the apple rolled to the tip and its weight added to the momentum of the blow," Wellman writes. The description provides an interesting excursion into the world of balance and function. The falchion was single edged except for the double-edged tip, which suggested the blade of a bowie.

The need for our fair lady of steel is acknowledged when Bowie meets the villain, Major Norris Wright, one dark night. Wright fires his pistol but the bullet hits Bowie's gold pocketwatch, saving our hero's life. Bowie attempts to fire back at Wright but the pistol fails to fire when he pulls the trigger. The need for a more reliable weapon becomes an absolute necessity. This scenario is fairly common in knife legend but nonetheless a fact. After all, who among us would dispute the need for another knife?

She Comes To Life

In chapter 21, our fair lady, the Iron Mistress, comes to life. Anyone who reads the account of her creation cannot help but love her.

Bowie's brother, Rezin, gives Jim a butcher knife with a cross hilt of hammered brass. Jim examines the knife and notes its weakness of design. He asks Rezin, "Who is the best blacksmith you know?" Several are named—Lovell Snowden, Jesse Clift, and James Black, the latter of Washington, Ark. Bowie chooses Black.

Jim travels to Washington, Ark., and stays at Elijah Stuart's Inn. He asks Stuart if he knows Black. Stuart provides directions to the blacksmith's shop on Franklin Street and comments, "He makes broad axes, plowshares, and corn knives so damned good that he kept five slaves busy meeting the demand for his product." Any blacksmith with a reputation for providing the best tools of agriculture has to be a true master of steel, for these cutting instruments are tested to their limit as a matter of course—thus another feather in our fair lady's hat.

Bowie walks to Black's shop, where the two men meet. The meeting is instilled with mutual respect. Bowie asks about Black's "different" tempering method. Black replies, "By your leave, sir,



The argument can be made that without Wellman's book and the movie of the same name, the ensuing fascination with Jim Bowie that persists to this day may never have come about. Here's Jack Edmondson mugging for the camera in his impression of Bowie, a role Edmondson has portrayed on educational television, at numerous knife shows and before various groups.

that's a trade secret." This was the way of the times. Blacksmiths kept ahead of their competition by knowing more and doing it better. The blacksmith who could make a tool that was stronger, sharper, tougher, or in any way better was a cut above the competition. Thus enters another charm, a veil, concealing part of her nature, a touch of mystery for our Iron Mistress. She was to be nurtured to life by a true master of his craft!

Bowie had carved a wooden pattern of his thoughts on the design of our fair lady. He hands the wooden model of his knife to Black, and he and Black discuss her nature—"Blade 11 inches long, 1 1/2 inches wide, 3/8 inch thick at the heel." As Black com-

ments on the thickness of the blade at the heel, Bowie states, "That is to give her strength. Above all [she] must not snap." Call it strength, toughness, grit, character, or just being faithful, our mistress has another charm to admire. A pistol that won't misfire, but it might, paired with a blade that won't snap—how good can life get?

Black's interest in the project of creating the Iron Mistress is evident through his conversation with Bowie. Black shows Bowie a prize possession, a piece of a meteorite that he found and has carefully kept secreted in a safe place for years. He speaks of the select properties he believes are in his cherished mineral from heaven.

The fact that Black is knowledgeable enough to make the steel rather than use the more common steel available adds dignity and emphasizes the dedication he has for the development of our fair lady, a lady that will transcend all other knives. The careful preparation of the forge for the blending of the steel is impressive. She's a product of well-tempered knowledge and devotion. (Author's note: There are some safety issues not fully discussed in the book. For those who wish to tread in "pools of molten steel," carefully consult specialized texts.)

A Fragment of a Star

When Bowie returns to claim his knife, the dedication and skill of Black is evident. The description of our fair lady includes words such as "harmony," "steel to hold an edge as none you ever saw," and "I quenched [her] seven times in panther oil." Bowie states, "I never thought such a knife could be. What did you do to make [her], James Black?" Then comes the statement known to all

Bowie enthusiasts. "I fused into [her] a fragment of a star. For better or for worse, this knife has a bit of heaven in [her]—or a bit of hell." My mother made me wash those words from my bedroom wall. Luckily, I used a pencil rather than paint.

As I read through Wellman's description of our fair lady's birth, I was impressed by the great deal of research evident in his discussion. He knew the

subject of steelmaking very well. He was highly knowledgeable concerning the nature of frontier blacksmithing and the demand for quality when it was available. His mention of the multiple quench—"seven times in panther oil"—suggests he had spoken to knowledgeable blacksmiths.

Whenever our fair lady of steel is mentioned or described in the book, her attributes are such that any man would be truly privileged to share time with her. For

the bladesmith, to create such a fine instrument of the cutler's art would be to transcend any other possible achievement. Crowds would cheer, maidens would throw rose petals at his feet, trumpets would sound the triumph of all dreams for the creator of the Iron Mistress. Excalibur fall to your knees—the Iron Mistress approaches!

The dreams build and one wonders when the duel between Excalibur and the Iron Mistress will come to pass—or will the Iron Mistress and Excalibur team up and end all evil? Possibly another author will delve into that potential scenario in the future. If not, it will be up to each individual to write his/her own sequel.

Yes, Paul Wellman, you crafted a classic. Thanks for the vision—a real, honest-to-goodness American dream!

**"To create such a
fine instrument of
the cutler's art
would transcend
any other
achievement."**

Paul Basch Tips on Classic Handmades

The knife buyer for A.G. Russell Inc. shares his views on what's hot in the genre

Each month, I eagerly await two publications containing photos of knives for sale. I carefully examine my issues of *The Cutting Edge* from A.G. Russell Inc. and the catalog from Bill Claussen's Northwest Knives and Collectibles many times, then save them for future reference. When it comes to studying the harvest from the many gardens in the world of knives, these publica-

tions are indispensable. Photos of pieces produced by thousands of makers honestly appear just being what they are—knives. When the maker's name can be determined, his name is listed apart from the knife, allowing me to study each piece on its merits. In some cases I can identify the knives through my understanding of the makers' individual expressions of design. Through the years, I have noted that some knives have increased in value significantly while others remain valued at or below their original purchase price.



Paul Basch—playing “caveman” at the 2000 Knifemakers’ Guild Show—has bought and sold handmade knives since 1979, including those by Blade Magazine Cutlery Hall Of Famer William Scagel. These mint-condition Scagel hunting knives were made in 1944 and 1945. (Lucie photo)

“Some were dog ugly, but you could use them.”

—Paul Basch

From the first knife show I ever attended, one man has consistently impressed me as having an absolute command of the handmade knife market—Paul Basch. At knife shows, Paul’s tables provide an opportunity to share time with many knifemakers through the extensive display of workmanship and history of the world of knives displayed thereon.

As many BLADE® readers know, the knife community came very close to losing Paul to serious heart problems this past February. When I heard of the incident I was very concerned, as I consider him a good friend and a true patriot in the world of knives. I also was furious with myself for neglecting to ask him the questions in the inter-

One of Basch's specialties is the handmade blades of the late John Nelson Cooper, maker of this full-bodied bowie. According to Rhett Stidham, this particular piece was used for the promotional shots for the early '70s mountain-man classic, Jeremiah Johnson. (Weyer photo)

view that follows, for the insight he commands concerning the custom knife marketplace—in his role as a buyer and seller of handmades for over two decades—is absolutely unsurpassed.

He and I limited our talk to classic knifemakers who are deceased and whose knives have increased significantly in value over the past 20 years—namely, John Nelson Cooper, Bo Randall, Frank Richtig, Rudy Ruana, and William Scagel. We also considered some knifemakers whose names very few will recognize. Following is our discussion:

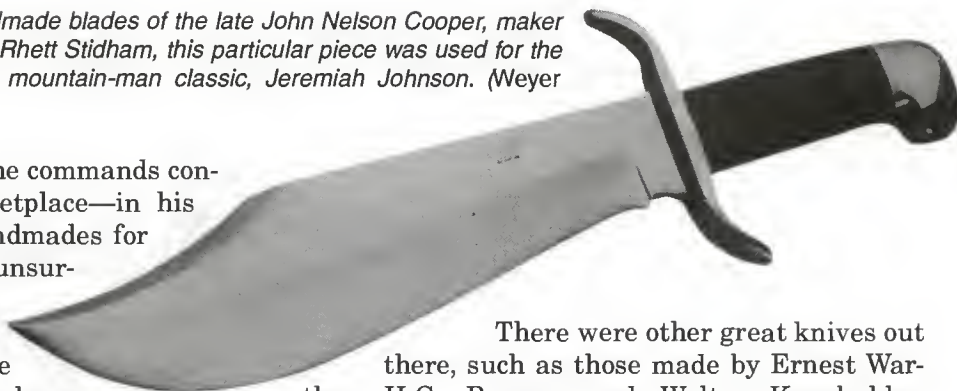
FOWLER: Concerning the knifemakers whose knives have greatly increased in value, what was it about them that made their knives collectible?

BASCH: The first thing was the knifemakers themselves. They were obsessed with making knives and they made a lot of them. They never knew their knives would be popular. The base line was they wanted to make a great using knife. Back then, there was no such thing as an art knife. Some were dog ugly, but you could use them.

FOWLER: What brought their knives to the attention of the knife community?

BASCH: Publicity brought attention to their knives. Before they were widely known, many Scagel, Richtig, and Ruana knives were selling for \$20 to \$50. They were good functional knives and they attracted the attention of some collectors. Then, one or more collectors wrote about the knives and brought attention to them. Harry McEvoy wrote about Bill Scagel and Harlan Suedmeier wrote about Frank Richtig and Floyd Nichols, and their knives dramatically increased in value. They were great knives to start with or the increase in value could not have happened.

As an example of what knowledgeable and available information can do for knives, consider what the writing by Rhett Stidham [in *The Randall Newsletter*] has done to increase both appreciation and value for the older Randall knives by informing the public about the history of the knives.



There were other great knives out there, such as those made by Ernest Warther, H.G. Bourne, and Walter Kneubuhler. Ernest Warther made knives from about 1896 to 1963. He made one special fighting knife that is very valuable and popular. Most of his knives, however, were kitchen cutlery and they were high-quality knives. He cared about the quality of his knives the same as the makers who became popular, but no one knows about him and the knives sell for much less than they are worth.

H.G. Bourne was another man who made a lot of knives early, on into World War II and after. Most of his knives were of high quality. Again, great knives, they have gained a fair level of demand, but not nearly as much as they are worth.

Walter Kneubuhler made mountain-man knives up into the 1970s. They were also great knives but not nearly as collectible as they should be, because no one wrote about him. The knife community just does not know about him.

FOWLER: What drew you to John Nelson Cooper?

BASCH: He lived in California, I lived in California; there were a lot of his knives available. I liked them and what went on while he was making knives. They were [inexpensive]. I could buy one for \$50 and sell it for \$100. I kept buying and selling them and found that the market could go even higher. Bill Martin and I decided to write a book about Cooper and his knives [John Nelson Cooper: Cooper Knives], not only to help the market but make people aware of who he was and what he made. He believed in his knives, he made great ones, and highly deserves the recognition.

Harvey Draper knives are works of beauty. His son, Kent Draper, also made exceptional knives. Their knives were highly polished, better than most. Still, they are hard to sell, but usually sell

"They were great knives to start with or the increase in value could not have happened."

—Paul Basch

According to Basch, Harvey Draper and his son, Kent—maker of this wharncliffe folder—made exceptional knives. Though Draper knives usually sell for a good value, Paul said that, for whatever reason, “They do not have a great many collectors seeking” them. (Weyer photo)



for a good value. They do not have a great many collectors seeking their knives.

FOWLER: Do you see any difference in the market between stock removal and forged knives?

BASCH: Forged blades may draw a little more attention. Many of my clients believe that they get a better knife when it is forged.

FOWLER: Does the amount of knives available from one maker seem to influence the value of his knives?

BASCH: Lots of knives from a maker does not seem to make a great difference. If he puts all he

can into a knife, they will be great. If the knifemaker can make more of the same quality, it would be better for the collector.

When I went to work for A.G. Russell, I wanted to do my part and bring recognition to the knives of those knifemakers who deserve being remembered for the contributions they made to the knife industry. I do my part to make the men popular by selling their knives for what they're worth. Many great knifemakers will never know the appreciation they deserve. I feel that I have helped develop a sincere and deserving interest in knives from

such men as Harry Morseth and Rudy Ruana, Bob Ogg, and Argell Toon, all of whom made great knives and are highly worthy of being known as among the top quality knifemakers.

**“Many great
knifemakers will
never know the
appreciation they
deserve.”**

—Paul Basch

Myths

Would Ben Lilly really have wanted a blade that would break rather than bend?

As with much of society, the knife industry has entered an age where knives are designed with production efficiency in mind, where images are sold in place of performance. Truth often has been replaced with falsehoods and, unfortunately, the greater (or most vocal) portion of American society would rather hear what they want to hear rather than demand absolute truth.

All too many of America's youth enter society prepared to join the flock where none dare question authority. Had this been the nature of American youth 250 years ago, the country would be without a constitution, Bill of Rights, or the freedom and unprecedented success it has realized.

**"I have never met
a man so
indifferent to
fatigue and
hardship."**

—Theodore Roosevelt

Very few question what they read. I feel that traditions and superstitions have been present in the behavior of man from the beginning and, while some of them are based upon knowledge that is useful, without the benefit of complete knowledge and understanding, there are also myths that impede the progress of man.

As a writer, I feel a responsibility to explore some of the myths that influence the world of knives, not that it will make a significant difference in the grand



Ben Lilly, bear and mountain lion hunter, reportedly preferred a blade that would break rather than bend. The author disputes that those words were uttered by Lilly. The knife was made by Lilly, who gave it to Pauline McCauley's late husband. It is as close as anyone can come to authenticating a Lilly knife. Mr. McCauley attached the handle. (Lilly photo courtesy High-Lonesome Books; knife photo courtesy Pauline McCauley)



In his effort to rid the country of mountain lions and bears, from 1914 to 1925 alone, Ben Lilly claimed to have harvested 210 bears, including one of the largest Nelson's grizzlies recorded in the USA, and 426 mountain lions. According to the author, no other legends of the frontier can approach Lilly's productivity. (High-Lonesome Books photo)

scheme of things, but maybe it will sweep away some of the debris from the floors of mankind.

First Myth Explored

"I would rather have a blade that would break than bend."

—Ben Lilly, as quoted in *The Ben Lilly Legend*, by J. Frank Dobie

The preceding quote has been repeated many times. For the readers who may not be familiar with Ben Lilly, I will summarize briefly from my research.

Born in 1856, Lilly tried many professions but was most successful at hunting. He felt that it was his destiny to rid the country of bears and moun-



With his faithful dogs at his side, Ben Lilly could follow a bear or mountain lion for months at a time, living off the land and depending on nature for food and shelter. (High-Lonesome Books photo)

tain lions, and this became his life's work. He hunted continually, living in the wilderness, rarely enjoying the most basic aspects of civilization. He died in 1936, having lived and hunted to the age of 78, spending his last two years in the equivalent of a nursing home. A monument to his memory stands seven miles north of Pinas Altos, N.M.

Lilly was the son and grandson of blacksmiths who knew what a using knife had to be. He not only made his own knives, he was highly coordinated, bull strong and, while guiding on foot, reportedly outlasted Theodore Roosevelt, who was on horseback hunting bear at the time. Concerning Lilly's ability, Roosevelt commented, "I have never met a man so indifferent to fatigue and hardship." Lilly could follow a bear or mountain lion for months at a time, living off the land, and depending on nature for food and shelter. Thus was his world, the only place he wanted to be.

In his effort to rid the country of mountain lions and bears, from 1914 to 1925 alone, Lilly claimed to have harvested 210 bears, including one of the largest Nelson's grizzlies recorded in the U.S., and 426 mountain lions. No other legends of the frontier can approach his productivity.



Ben Lilly (second from left) served as a hunting guide and counted such luminaries as Theodore Roosevelt among his customers. (High-Lonesome Books photo)

From a conservation standpoint, he should not be judged too harshly. His was a totally different era of American history. He spent his life, with his famous line of dogs, hunting bears and mountain lions, living in the wilderness for months on end during a time when one of his prey easily could in one evening destroy the lifetime labor of a pioneer ranch or farm family.

M.H. Salmon, author and book dealer who provided the photos of Lilly that accompany this article, interviewed Jack Hooker, who knew and employed Lilly to rid his ranch of mountain lions that were preying on his cattle in 1929, paying him \$100 per lion. Hooker stated: "Ben Lilly would make knives from trap springs, always sharpened them on both sides, and tempered them in his campfire."

Dobie's book describes Lilly's knifemaking activities. Whenever he came to a ranch that had a forge, Lilly would forge a few blades from the steel at hand, using old springs or the best steel available from the scrap pile. Knives were an essential tool of his trade; he could easily wear one out in months. Rather than carry all the knives he required, after a blademaking session, he would stash extra pieces in his various places of tempo-

rory residence in his hunting area, such as caves, old bear dens, and overhangs.

Lilly's favorite quenching oil, according to Dobie, for hardening the blades was reportedly "panther oil." After Lilly hardened the blades, he would then temper them back to the blue color of a "drake's neck."

Lilly stated that when killing a bear with a knife, one should "stick him in the side furthest from you. He will then turn to the pain of the cut, then you can stick him again if necessary." Once, in front of witnesses, he killed a healthy brown bear with a knife. When you hear statements like that, you know the man knew his business. Anyone who has ever witnessed the sheer power and efficiency of a bear killing its prey is immediately impressed with the utter devastation it can wreak. One swat from a bear's powerful front paw can easily break the neck of an elk calf.

Break Rather Than Bend?

I could not understand why a capable outdoorsman like Lilly would choose a knife that would "break rather than bend." He would have known better and his blacksmith heritage would have provided him with the knowledge to make a better

knife. There is no logic in his "break-rather-than-bend" statement, as a broken blade would have made the second cut impossible!

To test Lilly's methods, I forged some blades from an old buggy spring. Then, courtesy of a taxidermist friend, I procured some fat from an old mountain lion, as well as a bear (since there is not much fat on a mountain lion, at least this one, the pickings were pretty slim). I rendered the fat in a pot on my old hand-crank coal forge, providing both "panther oil" and bear oil for quenching. Blades were hardened in the heated oils, then tempered to a dark blue. The blades were soft enough to sharpen easily and did not break when flexed. While I fully realize there are too many unknown variables to positively duplicate Lilly's heat-treating system, I feel my

attempt could not be too far wrong so as to differ greatly from his results.

The source of the "break-rather-than-bend" myth had to have come from either a misunderstanding on Dobie's part or the editor or typesetter

of *The Ben Lilly Legend*, neither of whom probably would have known the significance of the difference between a blade that would bend and one that would break.

For further information and interesting reading, I recommend *The Ben Lilly Legend* by J. Frank Dobie or M.H. Salmon of High-Lonesome Books, P.O. Box 878, Dept. BL6, Silver City, NM, 88062.

The author thanks Stephen Siegfried of the *Silver City Daily Press*, M.H. Salmon, and Pauline McCauley for their assistance in compiling the information and photographs for this story.

**"Ben Lilly made
knives from trap
springs and
tempered them in
his campfire."**

—Jack Hooker

Long May She Cut!

The bowie: symbol of man's struggle for freedom, adventure and territory.

Several times a year, I look through hundreds of photos of the finest bowies of the 19th century. As always, I look at them from many perspectives.

First, I view them as works of art, studies of elegance, grace and sheer beauty, and as ornaments of another era. They reflect the times and dreams of the past as it existed in the mind of man, a past that never really was. Thus do many old bowies warm a man's heart.

Secondly, I look at them asking if any would be my choice were function an issue. Considered from this standpoint, all but very few fail to qualify. Their blades are too thin, too long or too light. Decorative touches and other aspects of design render them an abomination of function.

I don't mean to imply that a well-designed bowie will be found wanting when evaluated solely as an extremely effective self-defense tool. Bowies can be and are specialists when it comes to self-defense use. The two things I find lacking in bowies are:

1) Most are poorly designed for combat.

2) They're specialists and, by the nature of the design, don't fit the needs they must serve as an all-around knife.

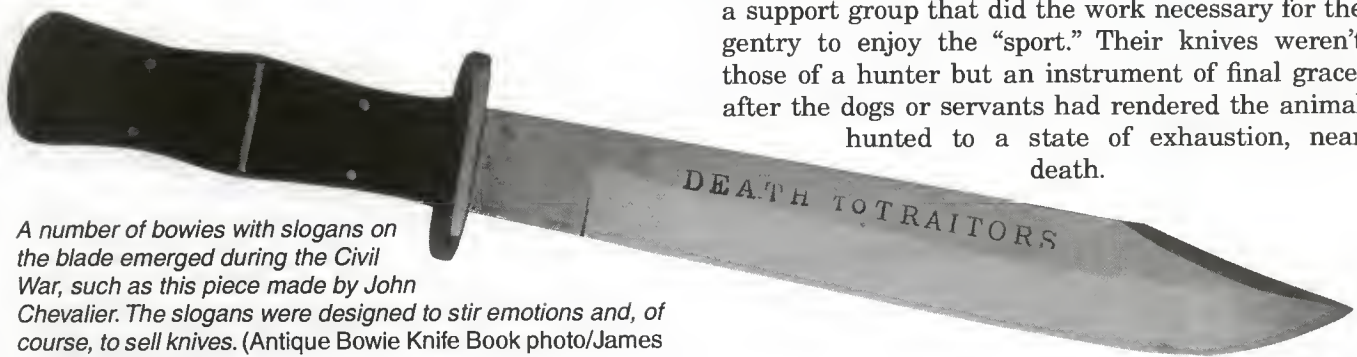
It's very easy to get caught up in the conflicts that exist between the symbols the old bowies represent, the art of their design, and their reputed functional aspects. I feel that actual function was never an issue in the bowie's birth. Many times I've tried to use a bowie as a hunter or everyday utility knife, feeling that I must surely be in error when judging its functional qualities, for too many esteemed individuals in the world of knives hold

the bowie in reverence for it to be totally lacking. Still, each experiment produced the same result: Were I to be in a situation where I had only one knife and had to depend upon the functional qualities of that knife to survive one-to-one with nature, I wouldn't

choose most of the famous knives generally recognized as frontier bowies.

I'm of the same opinion when I consider the functional qualities of the "hunting knives" of the English cutters that were so prized when frontier America was being settled. I find that very few would be my choice were function a primary consideration. Prominent English hunters were wealthy and hunted with a support group that did the work necessary for the gentry to enjoy the "sport." Their knives weren't those of a hunter but an instrument of final grace, after the dogs or servants had rendered the animal hunted to a state of exhaustion, near death.

**"Many old bowies
warm the heart
of man."**



A number of bowies with slogans on the blade emerged during the Civil War, such as this piece made by John Chevalier. The slogans were designed to stir emotions and, of course, to sell knives. (Antique Bowie Knife Book photo/James A. Klein collection)

Years ago, I came across a man hunting antelope on the Wyoming prairie. He was dressed in World War II army surplus clothing, had shot an antelope, and was trying to dress it out using an army issue surplus bayonet, the design of which was strikingly similar to the "great English hunting knives." He'd been working on the antelope for some time and, while he'd managed to poke many holes through the hide and intestines, like a dog working on a frozen beef in January, he hadn't achieved much.

He was very friendly and filled with good intentions. I watched for a while and asked if he could use some help. He replied that this was his first hunt, first antelope, and if I had any ideas, he was open to them. Using my knife, I taught him as much as I can teach a person on one animal, then loaded the antelope in my pickup and packed it to his vehicle. His was the plight when he mistakenly tried to use the wrong knife for the job. His knife was made for sticking—cut was not in its design.

In my opinion, the bowies made by the English cutlers for the frontier and battlefields of America were sadly lacking in functional quality. Still, the surgical instruments and carving sets produced by the English in the 19th century were, and are, among the very best cutting implements ever made. Why did the English excel in one venue of the functional knife and fail so miserably in others? I feel the reason for the discrepancy becomes fairly obvious simply due to the nature and proximity of the makers to the market the knives served.

Surgeons were readily able to influence the design of surgical instruments. They lived in the same cities as the cutlers, demanded functional

instruments, and could easily influence the design of the tools of the trade that they needed. The same relationship existed in the knives for the culinary industry. These aspects of

the knife industry were close to the consumer, well known, easily tested, understood, and communicated. To compare household cutlery to a truly functional knife of the frontier is like comparing a barnyard chicken—one that scratches and picks undigested seeds left behind by cows—to the bald eagle. They're both of the same nature, though the lesser of the two (the chicken) is much more plentiful, and their species will probably out live the greater (the eagle). While I love both as family, I feel just a little more when the eagle graces the skies over me.

Frontier Nature

Consider the nature of the battlefield and the frontier.

Men who knew what a knife needed to be were thousands of miles and light years away from the cutler, thanks to physical distance or the "chain of command." This may be part of the reason why so many of the bowies and other combat knives that are so prized today

were left behind on the trails by the soldiers. The knives of the frontier were made by the blacksmiths who were available to the men who knew what they needed. These "custom knives" were better designed for the necessary functions of cutting wood, clearing vegetation or digging in the dirt,

"The spirit of battle, yes; the pain of war, never."



Many bowies were left on the trail by soldiers who, while on long marches, discarded all but the most essential blades. (Photo courtesy Coby Mack)

skinning buffalo or whatever else was required of an honest knife.

For every man on the front lines, thousands are mired in support functions well within the boundaries of civilization. They're forced to live within a few feet of their neighbor and probably will never experience the challenge and skill of the hunt, or know a solitary camp under the stars with only the coyote for company. As with all men, their dreams take them to the frontiers of their imagination. This was the market that most of the English cutlers sought. Trying to succeed with the men on the front lines or frontier (who represented an infinitesimal percentage of the population) would have spelled economic disaster.

There was little requirement that these bowies and hunting knives ever knew the test of being used. They needed only to serve dreams—and maybe more that will be suggested later in this discussion.

In order to whet the appetite of the market, advertising appeared on the knives themselves. Slogans beckoning to the dreams of many were symbols as varied as the frontiers of the time, such as:

- Real Knife Defender
- The Hunters Companion
- The Real Hunting Knife
- American Hunting Knife

The Civil War brought many more slogans to the market place, including:

- Death to Abolition
- Death to Slavery
- Death to Traitors
- Protected by her noble and

brave volunteers

Knives of recent manufacture are heralded as the "Original Bowie," "Buffalo Skinner," etc. Strangely, I've never seen slogans like "Remember Valley Forge" or "Paul Revere, Hero of the Revolution."

For many, trapped in a lifestyle from which escape was difficult if not impossible, the purchase of one of these knives meant freedom for a time: Return home from work, take the knife from its place of honor, read its message, hold it in your hand, and dream of tomorrow when the grass of



Examples of repros of 19th century bowies by Steve Rapp are of those by, from top: Jonathan Crookes, Broomhead & Thomas, and Samuel Bell. Rapp's address: Dept. BL, 7479 S. Ramanee, Midvale, UT 84047 (801) 567-9553. (Weyer photo)

the prairie or forest and gold of California would come alive, and the American Dream would come true. Symbols of patriotism, adventure, and honor sold the knives. The makers of the bowie obviously spoke to the hopes and dreams of men who would never need a knife or know its weakness in design.

Modern Legacy

There has to be more that contributes to the legacy of the bowie. My quest to understand the desirability of bowies is seemingly without end, for each bowie speaks to the individual with a special

voice known only to him. My search for a reasonable explanation for this significant desirability of the bowie touches on many aspects.

Obvious in the quest is the meaningful number of highly intelligent, positively motivated citizens who hold the bowie in high esteem. Not one of the true students of the bowie would I consider to be of a highly aggressive nature. Therefore, it couldn't be that they would fall prey to the bowie's image as a "weapon." There must be more to the story. Advertising can only go so far in attracting a market for a product; the product has to have some value to sustain the market.

Personally, I don't perceive the bowie as an aggressive artifact of man. By virtue of its design, there are many more effective "weapons." When talking bowies with those who know the subject well, rarely does the topic of fight or kill enter the conversation. Instead, the discussion is focused on clean lines, beautiful curves, balance, art, and the symbols of events to which the bowie speaks. Never is pain, bloodshed or death mentioned. Bowies have been described as "Symbols of Defiance and Badges of Martial Intent." The spirit of battle, yes; the pain of war, never. In their own way, bowies serve as symbols of man's struggle for freedom, adventure or territory.

The need for many species to define and defend their territory is known to exist in nearly all, if not all, life, from insects to fish, birds and primates. It's even evidenced in man himself. However, when territorial disputes occur in nature, bloodshed or serious injury to the combatants is extremely rare. All creatures are related, a trait common to all life and a necessary aspect of the propagation of many species that may significantly contribute to the psychological well-being of man. While analogy alone is not proof that man is subject to the institutions of all creation, man isn't all that exclusive in nature.

As the world community becomes more closely interwoven and population density increases, man must shift from actual defense of territory to seek

symbols of his notions of territorial defense. These symbols take many forms in as many individuals. Examples are the American flag, the National Anthem, statues of Joan of Ark, paintings of battle scenes, and the books and quotes of patriots and explorers. Each man seeks his own expression of territory. These aren't aggressive acts but rather declarations of patriotism, morals, ethics, territory, or dreams.

For many knife enthusiasts, the function that the frontier bowie served transcends that of "weapon" or art, though these aspects aren't

entirely separate nor accurately defined as tenants of its desirability, for there are as many insights as there are individuals. This deficiency of readily defined perception is thus by its very nature accompanied by a lack of common individual perception as to the

nature of the bowie in its relation to the individual. Included, though not exclusively so, are the varying aspects of man's concern that he must be prepared to defend his territory, be it moral, ethical, political, historical, current, or simply declared in his dreams. To many bowie collectors, the bowie is a symbol of man's unity, a symbol of the fight against evil, and a symbol of the frontier. When the enthusiast buys one of these knives, this perceived need manifests itself, conceived in man's mind through his studies of human history and the courageous episodes of unity from his past. These emotions become enhanced and achieve expression when the knife touches man's heartfelt image of himself. As you hold the knife in your hands, you dream the dreams all men share and bring the knife into your life.

Long live the bowie in legend, art, symbol, and posterity, preserved, protected, and enhanced by knifemakers who cherish her for all she is and can be. Hopefully, some day one knife will symbolize fellowship, unity, and dreams for all mankind. I hope it's the bowie.

"Function was never an issue in the bowie's birth."

Found: The Lewis and Clark Knife?

The author and Abraham the Wonder Dog search for the Northwest Passage of knives

(Author's note: Read this on April 1.)

It was time for a break from making knives. I loaded the Willow Bow "Labrador crew" in the back of my pickup and headed for our favorite pawn shop. While most of the items that end up at the pawn shops are the same kind of stuff you would find in any pawn shop, once in a while something interesting turns up.

As I drove into the parking lot, I was met by an aged Shoshoni friend who, about 18 years ago, helped me build a fence. (River-ton, the city near where I live, is surrounded by the Wind River Indian Reservation, home of the Arapaho and Shoshoni nations.) In his hand he held an old knife in a sheath that looked like something my "new hand," a black Labrador retriever named Abraham, might bring home from the dead pile after calving time.

The old Shoshoni asked me if I would either loan him some money on the knife or buy it from him. He stated that the pawn shop had refused to loan him what he felt the piece was worth. I asked him what he wanted for it and he said \$20 would be enough. Without even looking at the knife, I gave him the \$20, tossed the piece in the back of my pickup, and went into the pawn shop to visit and look over the "new" merchandise. Finding nothing of interest, I returned to my shop.

Abraham never lets me forget anything. As he jumped out of the truck, true to his retriever heritage, he carried the knife, still in its well-worn sheath. He delivered it to my hand and, taking it from him, I looked it over.

The sheath was about shot, smelled strongly of bear fat, and at one time had been decorated with

porcupine quills and beads, a few examples of which remained. At one time blue glass beads were the most prized trade items. A blue glass bead was still attached to the tip of the sheath, indicating the sheath was once a valued possession. Some shreds of fringe also remained. Nonetheless, the sheath, even in its deteriorated condition, still had a lot going for it. The handmade handle was of bone with an old rawhide repair laced around it.

Removing the knife from the sheath, I was mildly surprised to find an aged forged blade in reasonably good condition. Barely visible through the tarnish and grease, the blade appeared to have some writing on it. Using some fine sandpaper, I cleaned up the blade to read its message. Several hours later, an inscription was vaguely visible:

"To Carbonneau Toussiant"
"a fine son"

"John Floyd, Feb. 11 1805"

If my memories of the Lewis & Clark Expedition are correct, the inscription would indicate that the knife was made for the husband of Sacajawea commemorating the birth of the couple's son, Jean Baptiste Carbonneau, who was born on the date inscribed on the blade in the first winter headquarters of the Lewis & Clark Expedition. There were five Indian villages in the area that is now known as central North Dakota: two Mandan and three Hidatsa. The villages constituted the trading center of the Northern Plains, drawing Indian and white traders from a large vicinity. On the west bank of the Missouri River, the expedition built winter headquarters, Fort Mandan, named after the Mandan village nearby.

**"Barely visible
through the
tarnish and
grease, the blade
appeared to have
some writing
on it."**

Since most of the equipment of the expedition was later sold at public auction in St. Louis for the grand sum of \$408.62 in the autumn of 1806, and as there were no provisions to pay for storage of the items, there are very few relics of the expedition known to exist.

I felt that should the knife be authentic, it could very well be the only surviving artifact of the skills of the blacksmiths of the expedition. If the information inscribed on the blade were accurate, the knife would have come from the Fort Mandan forge.

The blade inscription got my attention, as John Floyd is thought to have been one of the blacksmiths of the Lewis & Clark Expedition. I have been searching in vain attempting to find information about the blacksmiths of the expedition, and the pickings have been pretty slim. My interest was in their forging and heat-treating methods, the steel they used, as well as the design and quality of knives they made for the expedition.

I immediately saw this as my chance to explore the bladesmiths' abilities of almost 200 years ago. I buffed the rust and patina off the blade, then carefully examined the blade itself. Slight file marks indicated that it had been shaped by hand, and the blade was slightly convex shaped in the style of the time.

I etched the blade in ferric chloride and was pleased to see what I would call an excellent temper line about one-third up the blade. The grain structure of the steel was a little coarse but showed definite characteristic evidence that the blade was forged.

Hard Edge, Soft Back

The blade had not been sharpened for many years and failed to make one cut on my hemp rope. Sharpening the knife came easy. My old bench stone brought up a nice edge in seven minutes. In nine cutting tests, the blade averaged 30 cuts, indicating exceptional performance for a blade made almost 200 years ago—actually better than many present-day knives. Scratch tests on the side of the blade indicated a cutting edge that was significantly harder than the blade's spine. Since some question the probability of the existence of hard-edge and soft-back blades (differential hardening or tempering, depending on the method used) in frontier America, this at least conclusively proved that they did exist, at least in the shop of the man who made this blade.

How strong and tough was the blade? I had to know! I cinched the tip in my test vise and flexed

The inscription on the blade reads: "To Carbonneau Toussiant, a fine son, John Floyd, Feb. 11 1805." The handle is elk bone.

the blade to 90 degrees. The blade demonstrated superior strength, requiring the application of a length of pipe over the handle for additional leverage to accomplish the 90-degree flex. The blade also proved to be tough, as it did not crack. Seeking to determine its limits, I flexed it 180 degrees in the other direction, then back and forth until it finally gave up.

The edge cracked on the seventh 180-degree flex and the spine broke on the ninth 180-degree flex.

This was outstanding performance for any blade made at any time!

The next question was to determine of what steel the blade

was made. I sent the pieces of the blade to Rex Walter, requesting that he perform any and all tests that he felt would be of benefit in our study of the steel. His report is as follows:

"A chemical analysis of the steel revealed that the blade was made of steel rather typical of the time," including 1.20-1.40 percent carbon, .20 percent manganese, .02 percent chromium, .01 percent molybdenum and .05 percent vanadium. "The Rockwell hardness on the spine was 20-22 RC, increasing to 55-57 on the cutting edge. A microscopic examination revealed a fine equiaxed grain structure with a grain size of 5-6 on the spine, with the edge being 7-8. The grain structure had uniform fine carbides in a tempered martensite matrix on the cutting edge, with an annealed ferrite/pearlite mix along the spine. Decarburization and pitting due to corrosion was present to a depth of .020 to .035 inch. This is pretty fine grain for hammer and anvil work,

and demonstrated that the bladesmith who made it was definitely ahead of his time.”

Carbon Dating

In order to determine the age of the knife, I felt that some information could be gained by carbon dating the bone handle that had broken when I placed the pipe over it to flex the blade. I sent the pieces of handle to the university for the necessary tests. The results of the tests indicated the bone was from a yearling buffalo heifer that had died around 1800. Tests on the rawhide dated the repair about 12 years later, possibly necessitated by Jean Baptiste throwing the knife—or maybe it just broke due to the boy’s youthful enthusiasm. Still, the repair was well done, remaining fairly tight for almost 185 years.

Is the blade authentic? All indications are that it is probably the only surviving knife from the Lewis & Clark Expedition, but skeptics probably will dispute my claim. At least I got all the information I could from what remained of her.

Some may be rather amazed that I would destroy a fine relic of the past. This was a knife made to be used by a man who knew his steel well and put all he had into her creation. She was not meant to languish on a museum shelf behind glass. Like a time capsule, she carried a message to be heard, an opportunity to share time with men of another long-past era. All I did was open the time capsule and share the message she bore.

I tried to find my old Shoshoni friend to find out more about the heritage of the knife but, sadly, as he walked home that night, he’d fallen by the roadside and frozen to death. He had no family. The one man who knew him said the old man claimed to be related to Carbonneau Toussiant.

As there are no official written records to support his claims, the claims must be accepted as the thoughts of an old man.

All of the knife is not lost. There is hope that the sheath still remains. Abraham, watching me work on the blade, carried the sheath to a secret hiding place outside for safekeeping. Maybe one day he will return it and I will get some photos before sending it off for carbon dating.

Before signing off, let me leave you with the words of one of my favorite authors, John Steinbeck: “There are people who will say this whole



Fowler cinched the tip of the blade in his test vise and flexed the blade to 90 degrees. It demonstrated superior strength, requiring the application of a length of pipe over the handle for additional leverage to accomplish the 90-degree flex.

account is a lie, but a thing isn’t necessarily a lie even if it didn’t necessarily happen.”

Editor’s note: At last count, the author said Abraham had retrieved several rattlesnake rattles and assorted cow chips but no sheath. Meanwhile, BLADE®, along with the author, wishes you a happy April Fool’s Day and hopes that you take the preceding story in the lighthearted vein in which it was intended. BLADE also would like to thank bladesmith Rich McDonald for reproducing the “Lewis & Clark” knife and Jeanne McDonald for making the sheath. Rich’s list price to make a similar piece: \$475. His address: 4590 Kirk, Dept. BL6, Columbiana, OH 44408 (330) 482-0007.

The Price Was Right: Part I

John Andrew Clinton took on the Sioux, the buffalo, several gold rushes, and more—with his Price knife at his side

Editor's note: A documented history adds not only to a knife's monetary value but to its importance as a historical artifact. Following is the story of a Michael Price knife, the man who carried it, and their adventures together.

Born in Missouri sometime before the Civil War, John Andrew Clinton was the son of a teamster. He ran away from home at about age 13 after the Civil War and worked his way west, reaching San Francisco sometime in 1866. He had saved enough money to buy a Sharps Rifle and a knife, along with other necessities. Not only did he make an excellent choice for a rifle, the knife he chose was made by a man whom I consider to be among the premier knifemakers of all time—Michael Price.

While most of the Price knives I have been lucky enough to examine did not get far from civilization, this knife is an exception. One would have

to travel a long way to find another piece with as interesting a history as the one this beautiful lady of steel shared with her man.

In late 1866, Clinton became a meat hunter for the railroad to supply meat for the construction crews. With his Sharps Rifle, Price knife, team, and wagon, he could deliver one buffalo a day and was paid 5 cents a pound for the meat. If he picked his targets well, a buffalo could easily net him more than \$25—not bad wages for a young man at a time when the average income was less than \$600 a year.

The railroad he was working for was completed around 1870, and he next took a job as a scout for the U.S. Army in the Northern Plains. Gold was discovered in what is now known as the Dakotas and Clinton was there, changing professions from Army scout to prospector from 1874 to



Here is how John Andrew Clinton's Michael Price knife and its sheath appear today. For about 30 years—1866 to 1896—Clinton lead the life of an adventurer, including witnessing the immediate aftermath of Custer's Last Stand, working as a buffalo hunter and gold prospecting in Africa, Russia, and Alaska.

1876. The Treaty of 1868 signed by Red Cloud and Gen. William T. Sherman banned white men from the Powder River country. The Army had to abandon its forts in the territory, forts that were burned by the Sioux. Still, a number of prospectors searched for gold, dodging both the Sioux and the Army, the latter of which was treaty-bound to keep white men out of the territory. Prospectors had to keep a low profile. If discovered by the Army, their camps would be burned; if located by the Indians, they faced worse.

Early in June 1876, Clinton, prospecting with a party of about 30 men, decided that all the easy gold had been harvested and it was time to head south. The decision was an obvious one as for several weeks the prospectors had been encountering more Indian signs, indicating a heavy population of Native Americans in the area.

In their attempt to vacate the territory, the prospectors came upon the largest buffalo herd Clinton had ever seen. The herd extended for miles and, for some reason known only to buffalo, was densely packed.

While watching the herd, the prospectors were spotted by some Indians. The gold seekers had two choices: ride through the herd of buffalo or fight the Indians. Wisely, they decided to ride through the herd, which took more than 10 hours. The going was slow by necessity because if they spooked the buffalo into a stampede, the prospectors' chances for survival were slim to none. With a lot of skill and luck, they were able to negotiate through the herd to the burned-out remains of Fort C.F. Smith on the Bozeman Trail near the Big Horn River. There Clinton and his compatriots spent the night, fully expecting to be attacked by Indians the next morning.

Morning came on June 25, 1876. The prospectors waited for a while under the cover of what was left of the fort, but all was quiet. They decided it was time to escape and resumed their southern journey.

The next day they met some friendly Indians who told them that there had been a large battle near the Little Big Horn River, that the Army had lost and the victorious Indians had gone north.



John Andrew Clinton's later tranquil life as a farmer belied his adventuresome past. Here he is (left) with Dave and Christina Clinton outside their house in 1915. (Photo courtesy Lyle Hegsted)

"The Price knife was used to skin the big cat."

Clinton and his party decided to visit the scene of the battle and render any aid they could. They arrived at the site two days after the conflict, observing the bodies of Custer and those of the men of the 7th Calvary several hours ahead of the arrival of Maj. Gen. John Gibbon and his troops.

And the Michael Price knife was there!

Gold!

From that point, Clinton moved to the Wind River country—near where I live—prospecting for gold. The first winter he stayed alone in the high country, asking a friend to take the horses and come back for him in the spring. "If I am still alive, I will pay you," Clinton told his friend. "If not, you can have the horses and my gear."

In late fall, Clinton shot an elk, which ran into some brush and died. As it was getting dark, John Andrew decided to retire to camp for the night and come back for the elk in the morning.

The next morning he returned to where he shot the elk and heard something rustling around in the brush. He threw a rock into the brush and was greeted by a charging grizzly! He waited with his Sharps hoping the bear would stand before closing in on him, providing a shot at the animal's throat

and a chance to break the spinal cord. The bear did not stand, so John Andrew stuck the barrel of the Sharps into the animal's mouth and fired.

Some time later Clinton came to after being knocked unconscious. There was blood all around but no bear. Asked if he searched for the animal, John Andrew said, "No, I was just glad he was gone. He was very considerate; he left me one hind quarter of the elk."

Clinton survived the winter in the high country and continued to prospect in the Wind River area into 1878, when the British Parliament announced that gold had been discovered in Africa. He arrived in Africa broke and fought as a mercenary for the British and Dutch in the gold fields, where the two countries were allies by necessity in the Boer War. He was discharged in 1881. While in Africa he shot a black leopard with his Colt revolver, and the Price knife was used to skin the big cat. Later, in Japan, John Andrew gave the leopard skin to John Birch (no, not that John Birch) in return for Birch's help in procuring a Russian passport for Clinton, Russia being where another gold strike beckoned.

While en route to Russia, the group John Andrew was traveling with was attacked by ban-

aits. His 44-40 Winchester 73 decided the battle and Clinton later was surrounded with other merchants traveling the same route under the "protection of the foreign devil with the rifle that kills many." However, John Andrew subsequently found Russian mining techniques "very primitive and did not put a pick in the ground."

He returned to Seattle where he heard about a gold strike in South America, but there was no ship heading that way. As Clinton awaited passage to South America, gold was discovered in Alaska and he was there with his Price knife. While returning from the Klondike strike in 1896, he met Christine Anderson and they were married by a steamship captain. At that point in his life, Clinton decided to abandon the search for gold and started farming. He raised vegetables, selling them to others caught by "gold fever," finding life as a farmer more profitable than prospecting. Later, he moved to Olympia, Wash., where he farmed until his death in 1938.

In the final installment next, the author dissects Clinton's Price knife from just about every angle.

**"Gold was
discovered in
Alaska and
Clinton was there
with his Price
knife."**

The Price Was Right: Part II

John Andrew Clinton's Michael Price knife is a tribute to both the maker and her owner

Editor's note: In the first installment, the author reviewed the exploits of John Andrew Clinton and Clinton's use of a Michael Price knife. In the final installment, the author assesses the knife from the standpoint of a maker and a user.

The experiences shared between man and knife are long past. Only minute glimpses of their history are now available to us. But if we, as knife enthusiasts, listen carefully to what few memories are available, we can catch and enjoy a few moments of the events they shared.

What does the knife tell us about the men in her life? Every now and then I meet a blade that transcends the distance in time between her maker and me, and sometimes the men in her life. She is of such a complete nature that she yields thoughts from the spirit of the man who made her, as well as the man who shared time and tasks with her. Their skills are remarkable and easily read by close examination of her physical attributes. Such knives stand out from the crowd. Their beauty is enhanced by the wide gap that separates them from average pieces. John Andrew Clinton's Michael Price knife is one of those pieces

and at present the most outstanding example of these thoughts.

Price was a man of highly developed knowledge and skill when it came to making knives. He made both jewelry for men and extremely well-conceived, functional blades. I have been privileged to know two working knives bearing his name. In my opinion, based on careful examination of this knife alone, it is obvious that Price was an absolute master in the design and execution of a highly functional piece.

Every aspect of the blade geometry appears carefully planned and executed. There are no frills; it is simply an absolute monument to functional art. I have never seen a better knife!

Clinton was obviously a knowledgeable judge of functional quality in the tools he chose. His favorite big game rifle, a 50-110 Sharps, was the king of the hill in

buffalo guns, and the knife he chose was also well suited to his needs. He wanted the best. He worked hard, saved his money, and bought the best. The knife also clearly speaks to the fact that Clinton was in full command of the knowledge and ability to nurture her, his trusted companion, so that she

“What does the knife tell us about the men in her life?”



This is John Andrew Clinton's Michael Price knife as it appears today. It is the property of Lyle Hegsted, who allowed the author to examine the knife as well as Hegsted's copious research on Clinton.

*The maker's mark:
M. PRICE above/over
SAN FRANCISCO. Price
is thought to have made
knives from 1856-1889.*

**“Every aspect of the
blade geometry
appears carefully
planned and
executed.”**

With each stroke on the stone, he maintained an extremely fine edge flowing gracefully to the spine. The striations left by his sharpening stone are in themselves a monument to his command of knife function.

The present caretaker of this outstanding example of the art of the knife, Lyle Hegsted, offered me the opportunity to sharpen and test the piece as I wished. At first I was intent on exploring her ability. As I carefully examined her qualities, I was awestruck by the story she told. Other than carefully dressing her edge, I did not feel qualified to contaminate her epic of the frontier.

While modern men in the plastic-and-stainless-steel generation worry and fret over the maintenance requirements of carbon steel, Clinton's Price knife screams from the mountaintop to proclaim the pride and skill of Clinton in the care and maintenance of her carbon-steel blade. There are no rust pits on her—and this is a knife that was used by and served her master well on the frontier, miles and more than 100 years distant from today's sophisticated rust preventives!

He simply used what he had available—a pocket stone, fat from the animals he ate, and the common sense of an explorer in the frontiers of competence and adventure. No man could ask for more!

**“The blade reads like a
book, revealing
Clinton's skill in
keeping the edge sharp.”**



*The striations on the
blade record Clinton's
method of preserving the
convex blade from the
cutting edge to the spine.
The striations vary by
only two degrees from one side to the other.*

would be able to serve him to the best of her ability. I also have been privileged to examine the Colt revolver he carried for many years. It is yet more silent testimony to the skillful care he gave his tools.

A Must Read

The blade of the Price knife reads like a book, revealing Clinton's skill in keeping the edge sharp. There is no secondary angle at the cutting edge.

According to the author, a filed notch on top of the handle records a special incident. The killing of the black leopard mentioned in Part I of the story, perhaps? Note the tapered tang.



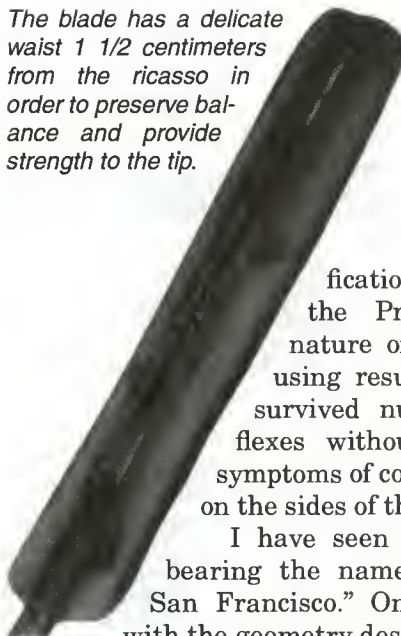
“There are no frills; it is simply an absolute monument to functional art.”

Epilogue

The blade geometry of the John Andrew Clinton knife marked with Michael's Price's name captured my curiosity and held me captive for many hours, especially while grinding knives. Some readers wrote me concerning their thoughts as to why there was a slight swelling in the front third of the blade. Was it to provide a better grip while holding the blade between thumb and forefingers? Could it be to provide greater strength? Was it simply a flair for the purposes of appearance? I thought about these concepts and came to the conclusion that nothing on this knife was by accident or for the sake of appearance. The man who made the knife was, in my opinion, too good for anything other than function to guide the design.

As this time we were working on some new 52100 steel and were testing a lot of knives to destruction. Blades subjected to multiple 180-degree flex, ground with the usual distal taper, showed evidence of high stress in the area of the blade where the Price knife was thinner. I decided to try my version of the Price Grind on a test blade. The results were immediately exciting. A few modi-

The blade has a delicate waist 1 1/2 centimeters from the ricasso in order to preserve balance and provide strength to the tip.



fications intended to blend the Price Grind to the nature of the steel we were using resulted in blades that survived numerous 180-degree flexes without manifesting any symptoms of compression or stretch on the sides of the blade.

I have seen quite a few knives bearing the name of “Michael Price San Francisco.” Only two were made with the geometry described. I have talked to others who are more knowledgeable than I on these historic knives and we have come to the con-

“I have never seen a better knife!”

clusion that these knives were made by one highly knowledgeable and skilled craftsman at the Price shop. Were they made by Michael Price himself or his father? We will never know. Were I to guess, after reading about the life of Michael Price, I feel that he was highly motivated to make knives that I feel come under the heading of jewelry for men—showpieces that were purchased by city folks who could afford them. I would bet that the knives with the delicate but strong waist were made by his father, intended for men who would need the knife to do the work of the frontier, rather than visit the opera house. The geometry of what I call the Price Grind would have made the blades tougher by lessening the stress in that area of the blade, thus lessening the probability of a blade breaking when needed to do a little extra on the frontier.

The author thanks Larry Syversen for introducing him to Lyle Hegsted and the Price knife. The author also is indebted to Hegsted for the many hours he devoted to the research of the history of John Andrew Clinton, and Hegsted's willingness to share the information with BLADE® readers.

Iron Mermaid of the Great Lakes

*The author re-examines a “true lady”
from the hand of William Scagel*

One Scagel knife speaks to me more than any other. The first time I saw her in a photograph, I experienced what best could be described as a love-hate relationship. The handle seemed to defy any sense of utility. Still, there was some unexplained attraction that held my interest. In my mind I would see her over and over, all the time knowing there was more to her than met the eye.

One evening, Dr. James Lucie, noted Scagel knife collector and bladesmith, invited me to examine some Scagel knives he'd brought to the Blade Show & International Cutlery Fair in Atlanta. There were a number of Scagel knives on the table. As always, viewing them together was like truly seeing and knowing the beauty of a flight of magnificent birds—all the same species, all from the hand of the same creator, each with its own singular identity, of the same nature yet varying uniquely, as if guided by some Darwinian hypothesis toward their intended destiny.

There she was, standing out as the queen of them all. Immediately I recognized the knife and my fascination drew me to her. I looked at her from all angles, trying to determine what it was that held my attention. I asked Dr. Lucie if I could hold her and he said “Certainly!” Experiencing a fear of trespass, though still with great anticipation, I reached down and gently picked her up. The message from William Wales Scagel began to come to me one thought at a time, as the smooth, firm caress of the knife's handle warmly touched my hand and heart through a magnificent blend of nature, function, art, and the unknown at its best. I still remember that moment as if it were yesterday, one of those chance encounters you never forget: a silent touch, a sense of mystery, a door

opened, a new frontier to explore. I felt my attraction to her growing rapidly. I was captivated. I knew there was much more to her than I could know at that time. She held the key to a message from her maker. Every emotion told me there was a message to be heard and I had to learn more.

The First Meeting

My first meeting with the Scagel knife was more than two years ago. At the time of this writing, she continues to “talk to me” after many hours spent with her. This past summer, Dr. Lucie again visited my wife, Angela, and yours truly here at the Willow Bow Ranch. While he slept, I sat at my kitchen table and, with his blessing, held the knife for hours on end through the darkness to the birth of a new day. The

**“The smooth, firm
caress of the
knife's handle
warmly touched
my hand.”**



*Viewed from the butt, the knife's
fishtail line resembles a fish
swimming away.*

“Scagel’s creation speaks of a great devotion to the knife.”

piece is more than 70 years old (she was made before 1926) and proudly wears the beauty marks of much use. I carefully dressed up her cutting edge on a stone, and looked closely at her through my 20x magnifier. I turned her over and over, around and around, studying, listening, and seeking the message from her maker (or makers, if you include Mother Nature and the monarch of the forest who grew the handle).

Years before, when seeing a photograph of the knife, my first visual impression was that Scagel had created a rather esoteric combination of steel and antler without giving it much thought. Finally, after years of getting to know her, another vision came to mind. The knife, while limited in function to an extent by design, soon revealed more honest creativity than was at first obvious. Through the careful blending of each curve perfectly executed into the next, ever blending, his creation speaks of a great devotion to the knife, each stroke of his file gracefully incorporating individual curves into an entire statement.

Obviously, too much devotion went into her development for her to be without some special message. Each curve is a perfect mirror image of the other. Obviously perfection is in every line. Hold her in your right hand and she is the perfect mate—the guard protects your hand from the blade. However, hold her in your left hand and she bites you immediately. Why? Certainly this isn’t by accident, as the high level of craftsmanship devoted to her leaves no room for any oversight in design. Is it a message from Scagel to the future, waiting to be heard?

The blade has a midline that’s perfectly matched to the handle. Below the midline, the blade gracefully flows to a keen cutting edge. Above the midline, she has a slight bevel that gently flows to the false edge. The grind lines are perfect, another obvious indication of Scagel’s devotion to this knife. He signed his name on both sides of the blade, with the outline of a fish following his name. Each side is a mirror image of the other. Knives that he made previous to this beauty were mostly stamped with his name and a kris or krisses. Therefore, I believe that the stamps of his name and the kris were available when he made this knife. Still, he didn’t use them and carefully signed his name instead. Even the sheath was made without the rivets that he normally used. All these details clearly indicate that this knife was intended to be something special, apart from his other creations.



Hold the knife in your right hand and she fits like a glove. Hold her in your left hand, however, and she “bites” your finger.

Five Questions

The questions that dominated my thoughts as I looked at the knife, while appreciating her unique personality, were as follows:

No.1 Why was she made this way?

History may reveal the answer. One has to consider for whom the knife was made. Thanks to Dr. Lucie, the blade’s history is preserved. She was a special order. The man who ordered her and owned her (until recently) specifically requested a fishing knife, stating that he didn’t hunt. Dr. Lucie bought the knife from the original owner. Therefore, a fishing knife she is.

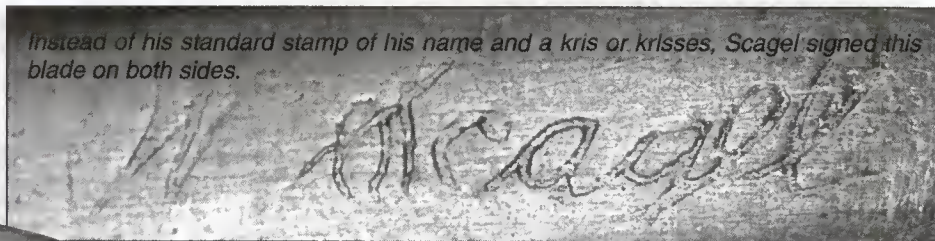
No.2 What statement did Scagel intend to make with this piece?

Many aspects of the knife hinted to her true nature, only to become known as our time together lengthened. My wife, Angela, asked, “Why the drawing of a fish on the sides of the blade?” The forked antler tine came to vision many times. Scagel loved to fish, loved the water, and knew the world from which man, and all life, comes well.

After many hours, the message suddenly occurred to me in one thought. The handle shape is commonly known as a fishtail tine. To my eye, the blade geometry represents the body of a fish. The original owner ordered a fish knife and Scagel made not only a fishing knife, but a knife in the shape of a fish. It took me only two years to figure this out! Many times the tools of the hunter take on the likeness of the quarry he seeks.

Scagel made the sheath without the rivets he normally used. Was this knife intended to be something special, apart from his other creations? (Lucie photo)

Instead of his standard stamp of his name and a kris or krisses, Scagel signed this blade on both sides.



Old English double rifles are engraved with figures of lions, elephants, and cape buffalo. Shotguns are engraved with birds and many knife handles bear the image of a fish. In this effort, the entire knife is a tribute to its quarry, the fish.

No.3 Why is the knife signed on both sides?

Scagel had to sign it that way because each side had to be alike, as fish are essentially the same on both sides.

The knife is truly a message from a master, since only a true master could create such a beauty. Only

“Obvious perfection is in every line.”

one who was totally confident in his mastery of the craft would ever attempt to build and achieve such a lady that at first almost looks like an abstraction of function. Scagel knew that one day her beauty (and what she represented) would grab the attention of other knife lovers who would appreciate his achievement. She could hold her head high in the company of man's art of any time or in any arena.

No.4 How did she come together?

Relating to my own experience, I use only natural materials for my knives (many times a unique piece of sheep horn will lay in my shop for years). I may pick up the horn over and over again, trying to develop a blade to complement my expectation for its potential, until one day the time and blade are exactly right and a knife is born. Therefore, I feel that surely the antler was Scagel's primary inspiration for this piece. First, it caught his eye. Then, he held it in his hand and thought the thoughts as they came to him. Slowly, a total vision of her complete nature began to form in his mind. Then a customer ordered a fishing

knife and it all started to come together. The blade (or possibly many blades) was forged to complement the knife's lines. Then, ever so slowly, one line, one curve at a time, the complete message came to Scagel and a lady or, in this case, a mermaid, an Iron Mistress of the Great Lakes, was born. Once he started on her, he was as obsessed as any artist on the frontier of creation.

No. 5 Why does the blade bite my left hand when I hold her?

Could this represent the hook that catches the fish or the tooth on the fish that can bite the angler? Another possibility: The man who ordered and originally owned her was an avid (addicted may be a more accurate term) fisherman. Could this have been a message to the effect that too much of a good thing is detrimental to a man's well being? Another possible explanation: Scagel is remembered in some circles of being a little “gun shy” of females. If so, and if he intended the knife to be a kind of mermaid, she, like many mates of fact or dream, can be dangerous. One or the other of these explanations certainly applies, for the left-hand grip is immediately revealing.

Conclusion

There are many knives that clearly tell by their nature that they come from the gardens of men. This Scagel piece transcends the common knife and comes from the hands of an artist who understood the marriage of man and nature. The blade wears the antler with all the pride, confidence, and absolute majesty of the original monarch who grew it, a fine tribute to man and nature. The man, in absolute and total command of his craft, carefully blended many aspects of nature, creating what I feel is a pure masterpiece.

The rancher, gardener, hunter, anyone who lives with nature and through tradition or ignorance chooses to fight her, knows only a life of frustration. The men who see, feel, and come to know and love nature learn to work with and appreciate her, and know only the joy of being one with what and who they are. Through this knife and the generosity of Dr. Lucie, I've come to understand and know a friend, one of the top masters, working in his world, his way—William Wales Scagel.

Whatever Happened To Bernard Sparks?

*The author compares notes
with one of the Guild's earliest makers*

This past spring, the Oregon Custom Knife Show introduced me to a fellow knifemaker whose work I always have admired. Bernard Sparks sold his first knife in 1966 and is one of several makers and blade enthusiasts who met in Las Vegas in February 1970 to discuss forming what would become The Knifemakers' Guild*.

Bernard stopped by my table at the Oregon Show and we shared some precious time talking knives. I had never met him in person before but, from the photos I had seen of his work and the genuine, realistic conversation we shared, I knew that he was no greenhorn when it comes to making knives soundly based on function—in other words, blades with which I could enjoy sharing time.

This past summer, Bernard and his lovely bride of 34 years, Vicki, spent some time on my Willow

Bow Ranch, camping out on the banks of the Wind River. While she cooked some of those legendary Dutch-oven meals that many of us recall with fond memories, Bernard and I talked knives. We soon discovered how close we had been to meeting before.

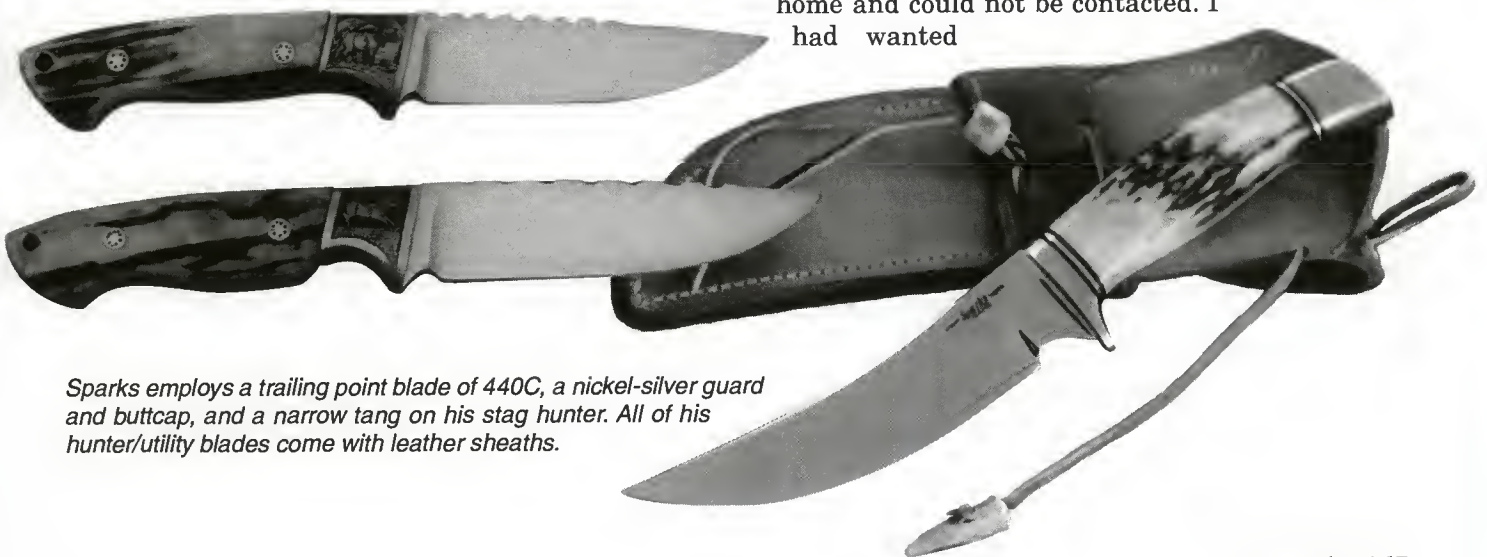
Different Trails

In 1984, the American Bladesmith Society held a hammer-in at the Trail Lake Lodge near Dubois, Wyo. Both Bernard and I attended but neither of us could recall the other being there. After the hammer-in, Bernard had been scheduled to attend a forging tutorial conducted by Bill Moran at Dr. Leon Borgeman's shop in Laramie, Wyo. The forging tutorial was canceled due to what was at first diagnosed as a serious illness of Dr. Borgeman's mother. The next day the illness was determined to be not as serious as previously thought.

Since Moran could not get an early return flight home, the decision was made to go ahead and hold the forging tutorial. However, the students originally scheduled to attend were returning home and could not be contacted. I

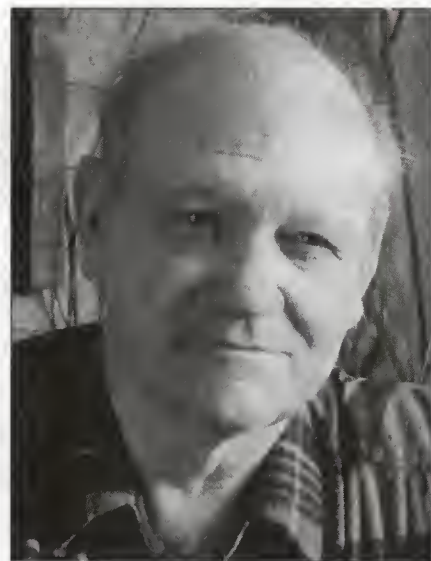
had wanted

Two full-tang fancy hunters by Bernard Sparks feature buffalo-horn (top) and stag handles with escutcheon pins. The 440C blades are fileworked on the spines and the bolsters are engraved by the maker.



Sparks employs a trailing point blade of 440C, a nickel-silver guard and buttcap, and a narrow tang on his stag hunter. All of his hunter/utility blades come with leather sheaths.

This Sparks fighter boasts an ivory handle with a scrimmed scene of a bear. The piece comes with a silver sheath.



Bernard Sparks

to attend Bill's forging tutorial for some time, but the classes were booked several years in advance. In hopes of getting a chance to learn about the forged blade, I had placed my name in the hat as an alternate. I was baling hay when my son, Matt, ran out to the field to inform me that I had been invited to the tutorial. I had 18 hours to prepare and get to Laramie for the start of the class. I made a few hurried phone calls to neighbors to do my ranch work for me while I was gone and, thanks to their and my family's help, I was able to attend.

There were two students at the tutorial: Frank Hinds, Ph.D., and yours truly. In essence, I took Bernard's place in the class. I consider the event one of the most significant influences in the direction of my knifemaking abilities. Until that time, I had quit forging knives simply due to a lack of knowledge and had been making stock-removal blades using D-2 steel, the source of which was used planer blades. My limited experience had led me to believe that D-2 was the top steel for knives.

Bernard was one of the first knifemakers to use Vascowear, a high-speed tool steel. (Editor's note: Another of the earliest users of Vascowear was Ted Dowell.) Sparks was one of the early makers to use 440C from Colter Steel Co., and, later on, 154CM. He actually was forging blades from 440C round dowels before switching to stock removal. Eighty percent of the knives he took to Las Vegas in 1970 had forged blades. Flat stock became available and he found that, thanks to cryogenic treatment, his stock-removal blades performed as well as those he had forged. At the time, the general interest was in stain-resistant stock-removal blades, so that is what he made. The revival of the forged blade had

not yet begun in earnest. Though years apart, we had each independently chosen steels of the stain-resistant type.

The time I spent with Bill Moran introduced me to the forged blade, and provided me with more basic information about making knives than I ever would have been able to achieve on my own hook. Thanks to what Bill taught me and the performance qualities of the properly forged and heat-treated blade, I became firmly convinced of the potential superiority of the forged carbon-steel blade. Had Bernard taken the class rather than fate providing me the opportunity to take his place, we easily

could have followed very different trails. If such had been the case, I wonder where the two of us would be in the world of knives now?

Stainless-Steel Clan

Bernard has been primarily a stock-removal man of the stainless-steel clan, while I cast my lot with the hammer, anvil, and carbon steel. While our methods vary, in our discussions we were never at odds because our knives are, by experience and design, knives of function.

Sparks was raised harvesting meat for a mink farm owned by his father. In order to provide food for the mink, Bernard skinned road kills as well as many other animals—both domestic and wild—considered unfit for human consumption. Through-

“While we both seek the same objectives, our methods are similar yet different.”

out his life he has hunted, trapped, and spent a great deal of time developing his knowledge of the nature of knife function. Adding to his talents, Bernard also taught art, industrial education, drafting, and CAD (computer-aided drafting) at Bear Lake High School in Montpelier, Idaho. His talents are manifest in his knives, making his blades the kind that are easy on the eyes.

Many knives are made simply because a certain design catches the maker's fancy. When considered through the eye of experience, the knives look out of place when you picture trying to use them. On the other hand, once the maker gains an understanding of function, everything fits. Whenever a maker shares a great deal of time using knives as Bernard has, his experience will be manifest in the design of the pieces he makes—provided, of course, that he has the intelligence, ability, and courage to apply his practical knowledge to his art. Bernard and Vicki showed me some of the Sparks knives they had with them, as well as photos of many special pieces Bernard had made in the past. I was greatly impressed by the functional beauty of his designs.

The time we spent talking knives was a remarkable experience. Bernard has developed his methods of sharpening and testing the cutting edge of stainless-steel blades. While we both seek the same objectives, our methods are similar yet different. He has developed a keen sense of touch,

“Bernard has been primarily a stock-removal man of the stainless-steel clan.”

feeling the edge with his fingers in a manner that intrigues me. I wanted to ask what he felt, but I knew that my experience with the cutting edge would probably forever cloud my understanding. We sat under a cottonwood tree and whittled fallen branches, carefully examining the tracks left by the cutting edge like bloodhounds on a hot trail. We cut with each other's knives and discussed aspects of edge geometry, overall design, and function in a rewarding debate that was warmed by great mutual respect.

Bernard Sparks retired from teaching in 1995 and is currently making knives full time using American-made 440C, 154CM (original stock), D-2, and ATS 34. He tests each blade for edge-holding ability. Men devoted to the stainless-steel knife will have all

the best of its functional attributes with a Sparks piece on their side.

*Author's note: According to Mrs. Vicki Sparks, who was at Las Vegas in 1970, to the best of her recollection, those men included: George Cooper, Merle Seguire, Bob Loveless, A.G. Russell, G.W. Stone, Steve Morseth, Bernard Sparks, Dan Dennehy, Ralph Bone, D.E. Henry, Harvey Draper, and W.J. (Bill) Sonnevile.

Bernard Sparks says the list prices for his knives begin at \$500. For more information, contact the maker at Box 73, Dept. BL2, Dingle, ID 83233 (208) 847-1883.

Last Father's Day of the 20th Century

The sharing of knives and good times with people you love—the most precious gift of all?

It was Father's Day, the last Father's Day of the 20th century. The phone was out of order thanks to a lightning strike, the windrower was broken down so cutting hay was put on hold, and all other ranch repair projects were waiting on parts. My cows had been trucked out to summer pasture, so no neighbors called to report cows on the road or in their hay fields. The knife blades I was working on were in the heat-treating phase of their development that requires nine days, and were in the good care of my Paragon heat-treating oven. I figured on taking the day off, leaned back in my chair, and found myself thinking about Father's Days and events past.

The first image that came to me was the day my Grandfather Ramme taught me to make a whistle from a fresh-cut willow branch. Using his wonderful old pocketknife to cut the twig and tap the bark loose, he expertly configured the wood to allow the passage of my breath to become a new kind of music. Since that day I have tried many times to make one of those whistles and never succeeded in producing sound. I have, however, whittled many willow twigs and still give making a whistle a fruitless try at least once a year, each time pleasantly

Wade Colter's Alamo Bowie is the knife that earned him his American Bladesmith Society master smith stamp at the recent BLADE Show. Note the images of the Alamo Mission in the mosaic damascus blade (inset) and in the pommel of the handle (inset). His address: POB 2340, Dept. BL10, Colstrip, MT 59323 (406) 748-4573. (Gallagher photos)



remembering time spent with Grandfather, his fine old redbone pocketknife in his hands.

The second memory concerns Grandfather's instructions on making a slingshot from the fork of a tree: two strips of rubber from an old inner tube, a piece of leather to house the missile, and a little string to hold things together. At this endeavor, I was highly successful and many a can rang with the music of my accomplishment as small stones dented their targets.

My third memory was of earlier times and the wooden swords Grandfather taught me to make, and the many ensuing "sword fights" my neighborhood chums and I had, garbage can lids for shields, the legend of King Arthur filling the air. The local dogs and cats also enjoyed our swordplay, as the cans without lids made for easy access to the choice treasures the critters previously had been denied.

My early shared experiences of the knife as a tool have never left me. To this day, many a conversation on Willow Bow Ranch has been accompanied by the simple whittling on a cottonwood branch, making nothing but shavings and time shared. Wherever a knife lover treads, he can find a mutual interest when he sees one of the friendly tools of man in the hand of another, or in the showcase of a seller of knives. It does not take long and a common ground for further discussion follows.

Searching For A Dream

My thoughts returned to the BLADE Show held recently in Atlanta, Ga., and the thousands of knife enthusiasts who came to the world's greatest knife show searching for a dream. The dream may have been to simply shake a hand or visit an old friend, in some cases—in all probability—for the last time. I saw some tears, many smiles, and am thankful that I could again share time about knives with people who know or want to know about them. I can still see the fathers who brought their sons to share the dreams of which knife shows are made. The enthusiasm of youth was evident and highly contagious. I wondered as to the nature of the times shared about knives when the show patrons got home, and silently gave thanks for the good times that the tools of men can enhance.

As I looked at the many knifemakers and enthusiasts of the knife at the show, I wondered what childhood experiences brought them to their present achievements. What events inspired the fine and knowledgeable gentleman of the world of knives, Logan Sewell, to search the frontiers of the bowie and develop the extensive knowledge he so graciously shares with all who ask?

What encouraged newly named ABS master smith Wade Colter to come to the world of knives as a medium to express his creativity and provide all knife enthusiasts with inspiration? His Alamo Bowie was as nice a tribute to a historical event as they come. His mosaic damascus steel holds the image of the Alamo, repeats it several times throughout the length of the blade and again on the end of the handle, and to my eye represents art at its best.

Why do so many special people come to the world of knives for pleasure? Many of them ask well-thought-out questions that indicate their interests are fully researched and originate from events far removed from their professions. Who took the time to develop these interests in them when they were children, and did these caring individuals realize how special the time shared with the youths was and how far the quest would reach into the future? A little time shared with a child that instills a lifelong interest that knows no bounds—what a precious gift!

The Long Voyage Home

The special events born from knives are not only those experienced directly; their history and influence spreads much further. One day while I was irrigating a hay field, I noticed a small raft floating down the irrigation ditch. At first I simply thought of it as some of the debris that finds its way into my irrigation water after it flows past town, but something about it held my attention. I picked it up and studied it carefully. The tiny vessel was well constructed, the deck was made of twigs, carefully whittled to a uniform length and skillfully tied together with some fine copper wire. Two rudders guided her course in the water while a wing feather stood as her sail. Another twig was standing upright to represent the traveler, and a sturdy craft she was. How many miles had she traveled? Who made her? How many shared in her construction and cheered her maiden voyage? While I was not present during her birth and launching, I felt privileged to share in the end of her journey. She now resides atop the computer screen that helped create this story. When I find myself without words, I stare at her and wonder of the visions of which she is made and know that it does not really matter. It is time shared building a dream. This fine craft was made possible by a simple tool of man, the knife.

My thoughts about knives are well conveyed by a quote from one of my heroes: "There is no limit to the benefits which human beings may bestow upon one another by the highest exertion of their diligence and skill."—Sir Winston Churchill.

Chapter 5



Outside the World of Knives

This is where we in the knife community reach out to those who somehow remain outside the world of knives. The thoughts concern the future, how we welcome newcomers and reach out to those who would join us. It is about advertising, knife shows, our family and, hopefully, thoughts about the future.

My First BLADE Show

It was 1988 and the author was about to embark on the greatest knife adventure of his life

As I prepared for the 2001 BLADE Show this past June, I found my thoughts returning to the first BLADE Show I attended. The year was 1988 and the show was at the Holiday Inn and Convention Center in Knoxville, Tenn.

Earlier, I had passed the performance requirements for my American Bladesmith Society journeyman smith rating with a 5160 blade. It was time to go to the annual ABS meeting—held that year for the first time ever in conjunction with the BLADE Show—and personally submit five finished knives to a panel of judges whose opinions would declare my qualifications for journeyman smith.

“I was short on cash, long on knives and had to borrow money to pay for the trip.”

It was a turning point in my life, my first big show, my longest trip from the Willow Bow Ranch, and the first time a panel of judges would review my work. I was short on cash, long on knives, and had to borrow money to pay for the trip. It was a serious investment, not only financially but also in my career as I saw it at the time.

The night before the show I didn't know anyone and ate the cheapest meal offered in a nearby restaurant. I didn't sleep that night; my thoughts filled with what I hoped or dreaded the future might hold. Opening morning, as I approached the Holiday Inn and Convention Center about an hour



Opening morning before the 1988 BLADE Show began, two gentlemen sat talking on a stone step. “The clothes they wore hinted that I might be welcome in their presence,” Fowler noted. One was Hugh Bartrug, the other Cleston Sinyard, the latter here with a couple of his damascus blades.

before the show was to begin, I observed two gentlemen sitting and talking on a stone step. The clothes they wore hinted that I might be welcome in their presence. One commented to the other as

"I met Clyde Fisher, who had been one of my heroes."

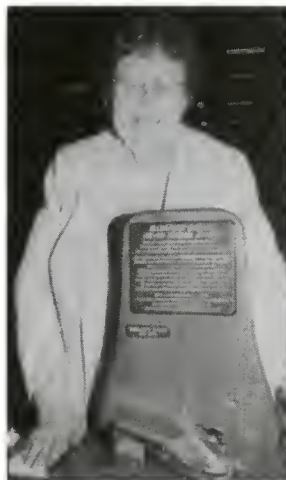
they both looked at me. Their eyes voiced a welcome and I met Hugh Bartrug and Cleston Sinyard. We were friends from the start. Our conversation wasn't about the show but of steel and forging techniques. It wasn't that the show wasn't on our minds; the discussion was more aimed at talking about what we knew instead of what we hoped might happen when the show began. It was kind of like bull calves looking through the fence before their first branding party.

Margaret Moran was in charge of the ABS section of the show and, as soon as I entered, she welcomed me and walked me to my assigned table. Her voice was filled with encouragement; her friendship will never be forgotten. As I looked around the show, I recognized many familiar faces that I'd seen in the magazines and, to my amazement, soon discovered that they were all human. They smiled and any knifemaker would know he was among friends.

I met Clyde Fisher, who had been one of my heroes since I read about his knives in an article concerning the Y.O. Ranch in a gun magazine. He shook my hand, we talked knives, ranch work, firearms, and we became friends. Later we traded knives, and his pieces are among my prize possessions. Dan Dennehy was there and we also shook hands; fine memories. That night I washed my hands with regret, wishing to somehow preserve the handshakes longer. I felt that I had soared with eagles.

"Paul Burke was first to buy one of my blades."

The judging took place and new journeyman smiths received their JS stamps. My knives weren't much in demand but Paul Burke came to my table, talked knives for a while, and was first to buy one of my blades. He asked many questions



At the 1988 BLADE Show, Margaret Moran was in charge of the ABS section. "Her voice was filled with encouragement," the author recalled. "Her friendship will never be forgotten." Here's the "First Lady Of Bladesmithing" with the inaugural Silver Slipper Award she won at the 2001 BLADE Show for her many years of helping administrate the ABS.

and encouraged me to continue my knifemaking career. His purchase of that knife and kind words and contagious enthusiasm remain a memorable event of the show for me.

Hugh Bartrug won an award for one of his damascus knives, and it was a beautiful work of art. Years later, Joyce Bartrug informed me that she and Hugh were as financially impoverished as I was at the time. "We couldn't even afford to have a photo taken of the knife that won the competition," she told me.

Future Icon Fodder

We were the lucky ones. Many new knifemakers go to the work and expense to display the fruits of their labor at a show and don't sell a knife. The story is well known in almost every forum of craftsmanship. Newcomers enter the arena from all walks of life, from big cities to remote towns with unpaved streets. Some are wealthy or have strong backing from a relative; others may have hocked their prize possessions to make the trip. Many who are destined to do well in their chosen field have a pretty rough beginning. The only thing that keeps them going is the absolute obsession with their art and an undying enthusiasm that fuels their pursuit of excellence. I feel that the hard times are fodder for the future icons of the world of knives because when success comes too quick, it's too easy for makers to take it all for granted and later wonder what happened to their dream.

It's no different for the fledgling maker now than it was for me when I first started. A typical show for him might go like this: He stands behind his table with a lump in his throat, smiles at every passer-by, and prays that someone will notice his work. Hours and countless people walk past. Some pick up a knife and ask such questions as, "Did you

make that?" or "Why did you make it this way?" The population of knives on his table doesn't decrease. He returns to his room, counts his cash, and figures his budget for dinner, hoping that the big day will be tomorrow. All too soon the show is over.

Some makers well remember packing up their knives long after the show has closed and the last person who might have bought a knife is walking out the door. The janitor saunters up and there is a glimmer of hope because he makes eye contact, and there's a chance to sell a knife at a bargain price. He looks at the knives on the table and asks "How much?" The maker tells him and the janitor looks at the knife in amazement, shrugs his shoulders and puts the blade back on the table. The janitor looks again and the maker's heart beats a little faster. Then the janitor asks how much longer it's going to take

**"It's no different
for the fledgling
maker now than it
was for me when I
first started."**

for the maker to pack so he can start cleaning up.

It takes a special kind of drive to remember the good times of the show. As the maker packs his bags, they may even be a little heavier than they were when he arrived—but that doesn't keep him from planning for the next show.

My advice to new makers: Don't ever think that you are the first or will be the last to come home without realizing your expectations. It's happened to all makers. Faith in your dream, trust that it will happen, eternal optimism and the ability to truly see and be thankful for the good times earned are a big part of what forges a knifemaker.

While the '88 BLADE Show was the author's first BLADE Show, it was just a few years later that he was one of four to be awarded an ABS master smith stamp. Those four, James Porter, Ed Fowler, Gary Anderson and James Cook.

On the Oregon Cutlery Trail

Join the author in an adventure into the past, present and future of blades


Oregon has become one of the meccas of the knife industry. Driven by unbound enthusiasm and imagination, the Oregon cutlery community continues to expand opportunities for the knife culture to enjoy.

While on our way to this year's Oregon Knife Show, Angela and I were invited to the open house at the new Northwest Knives & Collectibles store in Salem, Ore. Bill Claussen announced the event simply as the grand opening of his store. When we arrived, we were delighted to find much more than a knife shop. By popular acclaim of those who visited, it was rated as a true gallery of cutlery art.

During the open house, I listened while Bill, his family, and staff talked knives to the clients in the store. I was reminded of a time when I visited a museum filled with many wonders and the tour guides explained the exhibits. The folks at Northwest have created an atmosphere where any blade enthusiast, regardless of his or her level of experience, can come to know the world of knives as an honest, understandable, and friendly place to be.

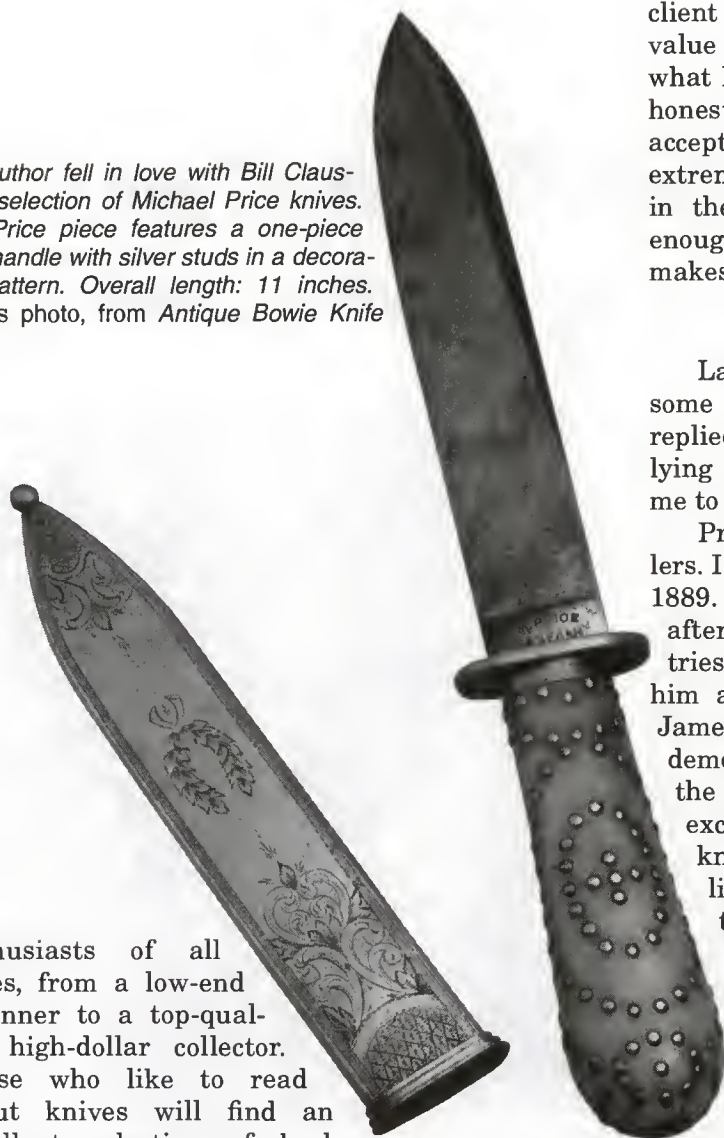
The basement of the store is filled with pieces from all eras. There are bargains in the form of great knives from the hands of unknown makers from all ages and countries, as well as investment pieces, the kind of which I have only been able to experience in books or behind glass.

The main floor has many well-lit display cases filled with knives to excite blade



Ed Schempp exhibits the form that won the rope-cutting competition the Monday after the Oregon Knife Show. Knifemaker Bob Kramer came in second, using a triple-*"thermal-cycled"* 52100 blade to cut seven ropes. Wayne Goddard, *BLADE*® field editor, finished third, cutting six ropes with his D-2 stock removal blade.

The author fell in love with Bill Claussen's selection of Michael Price knives. This Price piece features a one-piece ivory handle with silver studs in a decorative pattern. Overall length: 11 inches. (Voyles photo, from Antique Bowie Knife Book)



enthusiasts of all types, from a low-end beginner to a top-quality, high-dollar collector. Those who like to read about knives will find an excellent selection of books there. Not only are the store's prices more than reasonable, the collector is guaranteed quality backed by Claussen's knowledge, honesty, and experience.

Simply stated as an example for all who wish to keep the world of knives a nice place to be: Recently, a gentleman sent Claussen a package containing several blades by regular mail. Bill opened the box and was amazed to see an original, mint-condition Scagel knife enclosed. The gentleman stated that he had bought the box of knives for an average of \$35 per piece. Needing money, the man asked Claussen if he would buy them for whatever he (Claussen) thought they were worth. This is the kind of event that reveals the true nature of all parties involved. While Claussen easily could have paid very little for the Scagel and realized a considerable profit, he telephoned the

client and truthfully advised him of the actual value of the knife—about \$5,000—and told him what he could sell it for and the kind of profit he honestly would like to realize in the deal. The man accepted a reasonable offer for the pieces. I am extremely pleased to witness this level of integrity in the world of knives, for greed is prevalent enough in the world culture, and greed always makes enemies. Thanks, Bill.

Price Was Right

Later, Claussen asked me if I would like to see some Michael Price knives. Overwhelmed, I replied, "Absolutely!" There were three of them lying on a table upstairs in the store and he told me to feel free to look them over.

Price was one of the great San Francisco cutlers. I believe that he made knives from 1856 until 1889. Today, his blades are among the most sought after of the one-man custom knifemaking industries of America's past. It was the pieces made by him and other early American cutlers, such as James Black, Henry Schively, and N.P. Ames, that demonstrated the creativity and enthusiasm of the individual craftsman free of the shackles of excess government and tradition that produced knives that were to be copied by the established English cutlery industry, then exported to America for sale.

Through the years, I had seen only pictures and reproductions of Price knives, and most of the reproductions were made by makers who had used the pictures as guides. While the knives were pretty, I could never understand the attraction they commanded, for the handles on the reproductions were very unfriendly to my hands and, to my eye, the grinds on the blades were as sterile as ice cubes. Until this day I could not understand the attraction so many held for Price's knives.

The moment I laid eyes on the original knives from Price's hands, I knew there was infinitely more to his pieces than I had realized. As I shared time with this great knifemaker of the past through his knives, I developed a deep respect for his talents. I came to know his blades as true works of art, picturesque beauty, and craftsmanship unexcelled in the world of knives. The tapered tangs surrounded by graceful handles were kind to my hands, every surface carefully rounded and designed to caress my hands in any position I held the knife.

The blades were finely ground to a subtle convex transition from a nicely rounded spine to an infinite cutting edge, each and every delicate curve

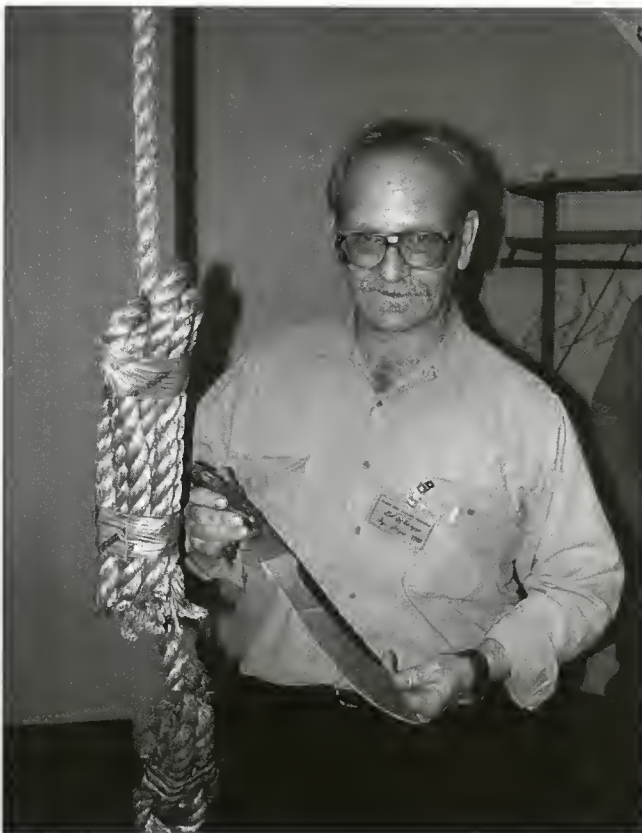
**"Price's work
bears the complex
yet simple natural
essence of the
blade in harmony
with man."**

blending to a precision instrument of cut, resulting in an absolute work of art dedicated to function. To me this is the work of a true master of the ability to develop the harmony of nature in the art of the knife. I have seen no better. I spent an hour-and-a-half looking at three knives, getting to know Price's work. I easily could have devoted much more in careful study of a true master of the cutting edge, for I am sure that I missed more than I saw. It takes time to get to know an elite cutler by his knives, for his work bears the complex yet simple natural essence of the blade in harmony with man. In my opinion, the Price knives represent the work of a true master, the kind you cannot forget once you experience it.

Some definite thoughts come to mind after examining the Price knives. Obvious was the fact that he was well aware of the characteristics of a precision cutting edge. Unfortunately, not much is known about him, for time has eroded the answers to the origin of his deep understanding of the true cutlery art. (Editor's note: For more on Price and the great San Francisco knifemakers, see *Knifemakers Of Old San Francisco*, 2nd edition, by Bernard Levine.) I would pay dearly for the opportunity to interview him personally and explore the many questions I have concerning his art. He had no true competition in his day, for no client who truly knew knives could have accepted anything less. Obviously, Price thought for himself and spent a lot of time studying the functional dynamics of his achievements. His knives were based solidly on keenly observant performance evaluation, an absolute necessity to all makers who desire to make blades that excel at the job for which they are intended.

Keen On Eugene

Angela and I proceeded to the Oregon Knife Show, produced by the Oregon Knife Collectors Association, in Eugene. Once again, the show was magnificent, and the variety of knives on display



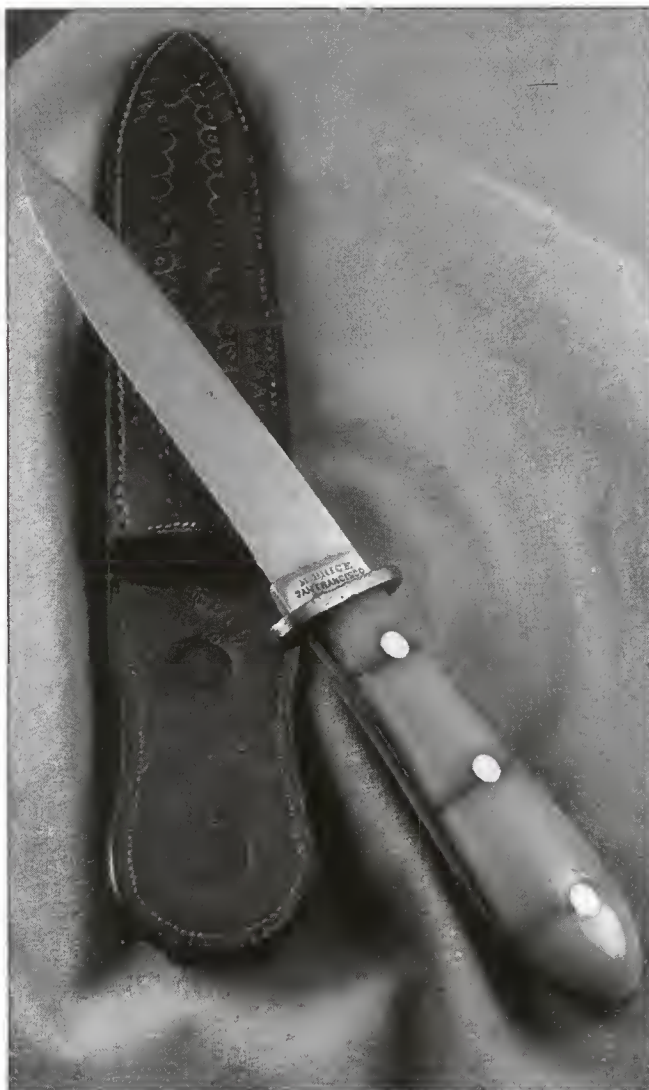
Ed Schempp holds his rope-cutting-champion knife with an ultra-sharp blade of 52100 quadruple quenched and triple tempered. Next to Ed is the bundle of nine ropes, one of which is dangling by several strands.

and for sale was as widely varied as any cutlery enthusiast could want. There were special demonstrations, competitions, and events for enthusiasts of the knife.

A special rope-cutting competition was well attended and the winner was Ed Schempp with a beautifully designed, ultra-sharp blade of 52100 that had been quadruple quenched and triple tempered. Schempp used his flat-ground blade to cut nine ropes, each an inch in diameter. Even though several strands of one rope out of the nine were left intact after Ed took the final swing with his knife, he was awarded credit for cutting all nine by popular vote of the contestants.

Knifemaker Bob Kramer came in second, using a triple-"thermal-cycled" 52100 blade to cut seven ropes. Wayne Goddard, veteran knifemaker and *BLADE®* field editor, finished third, cutting six ropes with his D-2 stock removal blade.

The rules of the rope-cutting contest dictated that each competitor had to start by cutting a piece off a 1-inch, free-hanging rope with one swing of a knife. Then another rope was added and the con-



As the author wrote of one of Bill Claussen's Price pieces: "The egg-shaped ivory handle with the cracks is also well done. Note every aspect of the handle is kind to the hand that holds it. Even the edges of the guard are slightly rounded!"

testant had to cut the two ropes. By the time the number of ropes reached nine (minus the several strands), Schempp was the only contestant left. Contestants could not resharpen their knives during the event. In order to win, Ed had to use his knife to cut 45 pieces of rope in all, each 1 inch in diameter. Many of the contestants cut a lot of rope getting ready for the event and their preparation

was obvious. It was an outstanding job by Schempp and everyone else who competed.

Bill Adams and Bruce Voyles attended the show and, whenever they are present, their knowledge of the history of knives brings attention to interesting edged artifacts that normally go undetected. Knives that most people would not notice rise to the top and become the stars they were meant to be when Adams and Voyles are around. When you see either of them walking down the aisle with a knife in his hand, you know it is something special.

For years, Phyllis and Wayne Goddard have hosted an open house the Monday after the show. The gatherings have been highly inspiring to all who attend and have slowly outgrown the space at the Goddard home. In order to continue the traditional Monday gathering after the show, the open house was held in conjunction with knife seminars in a conference room at the show fairgrounds.

Knifemaker Phil Wilson hosted the seminars and invited Ed Severson, manager of the Hot Work and Die Steel Development Division of Crucible Materials Corp., to talk. Severson is a dynamic speaker who eats, sleeps, and breathes steel. His presentation on steels, heat treating, and thoughts about knives was dynamic, filling in the blanks many of those in attendance never knew existed. He answered questions from a room full of makers and students of the knife. He not only answered questions, he elevated the quest for the excalibur of the future and brought an assurance that Crucible cares about knives and knifemakers.

Knifemaker Bill Harsey brought a special treat to the seminar. I have heard about racing axes used in lumberjack competitions for years, and for the first time was afforded the opportunity to examine a competition-proven champion's axe. The cutting edge of the axe was as carefully planned and developed as any specialized cutting instrument. Every aspect of the axe head was well thought out and proven in competition. The design of these axes has evolved over centuries of wood-cutting science and, should you ever get the chance to examine one, take your time and get to know it well, for each one represents quality craftsmanship based on the science of cutting wood and should be an example to any student of cut.

Where Are We in the World of Knives?

*The author uses his “cutlery sextant”
to answer his own question*

I recently read a quote by Daniel Webster. He was referring to a ship at sea that had been tossed about by a storm for several days. Heavy cloud cover had prevented the use of the navigational aids of the time and high winds had worked the vessel over like a tumbleweed in a twister. The first calm day the ship's captain wondered, “Where are we now?” He picked up the sextant, determined the craft's position, and resumed course for the original destination.

I would like to address the same question in terms of all knife enthusiasts and the cutlery industry in general: Where are we in the world of knives?

There was a time when most production knives were made by outfits in other countries. They had their own styles and Americans bought them. Then, in their small, one-man, homemade blacksmith shops, American bladesmiths started creating true knives of distinction. America, of course, already had its own kind of knife. The bowie was a prime example. Samples were bought by travelers from abroad. They took the knives back to their



Knifemaker John Yeackley made some wooden knives for the author to give to kids at knife shows. According to the author, Yeackley's efforts are reflective of those special knifemakers who work to bring the talents of a new generation of blade enthusiasts—children—to the world of knives.



"America has become the information center of the cutlery industry."

own countries, where they were copied, mass produced, shipped back to the land of opportunity, and sold in great numbers.

Now, in my humble opinion, the American knife industry is forging ahead. Knives designed in the USA are being made in America, and some of these homebred knives are second to none.

I feel the U.S. cutlery industry is setting the pace. I believe that the foundation for its success lies in the fact that America has become the information center of the international cutlery industry. In the USA, four distinctly different publications are devoted solely to the knife industry. The wealth of information available to those who read nurtures the curiosity of explorers in the world of knives, inviting the newcomer and helping him get started, as well as challenging all knife enthusiasts to expand their frontiers. More information is readily available than ever before. All it takes is a visit to the newsstand or library or a phone call and the new knifemaker is on his way. The shackles of tradition melt before the face of creativity.

Quality Is What Matters

BLADE Magazine® has been a leader in the knife industry for more than 27 years. From its inaugural issue in 1973 to the record-setting, 180-page *BLADE Show* issue of August 1999 and beyond, no competitor has come close to *BLADE's* performance. But it is not simply a matter of page count or copies sold or even things so obscure as advertising-to-editorial ratios that make *BLADE* the leader. Truthfully, many of these statistical accomplishments are meaningless to the knife enthusiast.

What does matter is quality. The primary concern for the average reader is based on the information provided and the benefit reaped from having a chance to read about knives. Each month when a reader opens a newly printed *BLADE*, he knows that the articles are fresh, accurate, and informative. Over the past few years, *BLADE's* success is most prominently viewed by virtue of more pages brightly displaying the work of many of the



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industry's leading makers. There is also more (and greater) technical information from the finest assemblage of knife writers known, writers who make, collect and/or use knives every day of their lives. The August '99 *BLADE* provided as many high-quality editorial pages than were produced by its chief competitors combined.

BLADE leads the industry simply because it cares. It cares about the industry it serves and about the readers who entrust its staff to share quality time with them, bringing the world of knifemaking to their door in the form of the printed word, photography, and dreams about knives.

"The competition in the knife industry is stiff."

World Of Knives Supplier

Knifemaking materials and technical information on how to use them are readily available thanks to the knifemaking supply companies. Meanwhile, technical books, videos, hammer-ins, and knifemaking schools are abundant and affordable, bringing more makers and diversity to the industry on a daily basis.

The steel industry is a prime contributor to the potential success of the world of knives. Rex Walter (Dept. BL3, 637 Portersville Rd., Ellwood City, PA 16117 [724] 752-0742) has access to many tons of

high-quality, 52100 steel, all from the same lot. The steel is in 5-inch round bars, each 20 feet long. He also has access to a 130-ton Chambersberg hammer and the equipment required to forge the steel down. If requested, he can surface grind it to any dimension a knifemaker wishes. This is a major advance for my favorite steel, as now a highly consistent source of material in workable form is available for any knifemaker. In the future, makers will be able to experiment, exchange information, and all be working with the same material.

For many the competition is stiff, but competition is mere child's play to the explorer who follows a vision and commands an expedition to new frontiers. The opportunities are virtually unlimited. The thousands of individual custom makers bring many talents to the knife industry. They provide a new vigor to an industry that profits greatly from the information that is readily shared by many good men who devote their talents to the future of the world of knives.

I see more factory and custom knives in what I classify as "entry-level pieces" than I ever have seen in the world of knives. They are inexpensive and most are what many would call "disposable knives." They do not cost much or last long but serve the function of providing many new and up-and-coming members (both knifemakers and their clients) a source of satisfaction, sense of accomplishment and the funds necessary to do more.

Members Lost

It seems the knifemaking fraternity loses more of its members than it should, or maybe I am just getting to know more of the members (the more I know, in other words, the more it sticks out when one or more of them leaves the industry for whatever reason). On many occasions I wonder how far ABS master smith Hugh Bartrug



The pattern-welded steel coming out of Montana continues to amaze, as seen here in Rick Dunkerley's dry-fly damascus on the blade and frame of his folder. Dunkerley made a dry fly out of nickel, put it in a square tube and filled in around it with 1084 steel and forge welded it for the dry-fly effect. Rick said he sold the knife at the Guild Show for \$2,500. The fish damascus inside the frame is by Nevada's Devin Thomas. (PointSeven photo)

would have taken his art if not for his illness. At the time of his stroke, Hugh and his wife, Joyce, were the absolute creative leaders when it came to the art knife, as far as I am concerned. I wish Hugh and Joyce all the best.

**"The poorest knife,
made by the hands of
an enthusiastic
beginner, transcends
time wasted
watching TV."**

At the same time, I wonder how many individuals have the ability to contribute greatly to the quality and imagination of the world of knives who will never be heard from simply due to their failure to give knifemaking a try. I suggest and believe that even the poorest knife, made by the hands of an enthusiastic beginner, greatly transcends time wasted watching TV. Thanks to such a knife, there are at least the dreams of the beginner and something tangible to mark his existence and an appreciation for his craft when the day ends.

Fancy damascus knives constantly are getting more intricate. Next time you pass by a table of one of the Montana knifemakers, look very closely at some of the damascus patterns they are making

and try to figure out how they did it. Some of the patterns are so detailed they are passed over by many who do not take the time to study the mechanics and imagination that went into making them.

My friend, knifemaker Dick Iiams, is no longer around but the memories remain. One hot summer's day, he and I were sitting under a shade tree in my yard whittling cottonwood branches to slivers, a common practice that seems to smooth any conversation. Our topic was the funeral of a mutual friend. Dick stated that when his time came, he wanted a simple pine box for a coffin. When he was laid to rest it was in as nice a pine box as I have ever seen. Inlaid on the side of the coffin was an exquisite bowie. It was a fine tribute to a citizen of the world of knives.

Knifemaker John Yeackley (Dept. BL3, 935 Baptist Rd., Colorado Springs, CO 80921) sent me

**“Many
knifemakers are
working with
youths to bring
their talents to the
world of knives.”**

some wooden knives, asking that I give them to kids at knife shows. His workmanship and dedication to the young should be an inspiration to everyone, for his knives of wood are as good as they get and, more than anything else, point to the future of the world of knives—children. Many knifemakers are working with youths to bring their talents to the world of knives. You can never predict the results of a few

moments shared with another, especially a child, and if you make a difference by virtue of unselfish time shared, you are forever young, for your ideas will nurture the future.

As knife enthusiasts and an industry as a whole, where are we in the world of knives? We are alive, well and growing, nurtured by the rich climate of the world of blades—and among friends.

Media Madness Is Killing Our Country

*Can the right to make knives be the key
to America's future?*

Several months ago, I was sitting in the waiting room of an Eastern hospital, sharing time with several people unknown to me who were waiting for word on the condition of loved ones. Unlike the kind of people to whom I'm accustomed, these folks were about as impersonal as a rock. My usual smile and greetings were largely ignored. As new folks entered the room, there was no eye contact or casual conversation. Some watched TV, others stared at the wall or read magazines. I felt like I'd drifted to some foreign world.

An elderly gentleman entered with what appeared to be his granddaughter, who was about 4 years old. He also ignored the presence of any other people in the room. The little girl wanted something to eat, so the old man bought a package of cookies from the vending machine. The child was unable to open the package and asked the man to open it for her. Tugging unsuccessfully at the unyielding wrapper, he stood and reached into his pocket. I anticipated the appearance of one friend—a pocketknife—to open the package. As the man's swollen, arthritic hand slowly exited his pocket, the little girl watched with anticipation, too. What appeared instead was a tiny *nail clipper*! She watched anxiously as he opened the bag of cookies. I couldn't take anymore and left the room, preferring the sterile hallway to the malignant waiting room.

Schools And Knives

At this past spring's Oregon Knife Collectors Association Show in Eugene, while eating lunch, I shared some time with a young boy. He proudly showed me his "first pocketknife," immediately adding that he would *not* take it to school with him. My first thought was to explore the dynamics

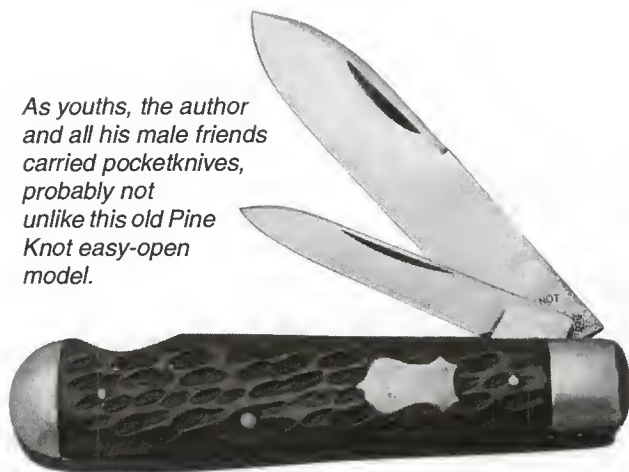


What kind of message is sent when children are banned from making knives in a controlled environment? Here, 11-year-old Jonathan Watts holds a two-blade he made under the watchful eye of his grandfather Wally Watts.

of pocketknives and schools with him, but decided it best to stay silent in order to keep him from becoming another expelled student.

When I was a kid, I didn't know any male who did *not* have a pocketknife, nor would I have

As youths, the author and all his male friends carried pocketknives, probably not unlike this old Pine Knot easy-open model.



wanted to know any man who didn't share the interests that would necessitate his carrying one. How could a guy be a guy and *not* carve wooden birds or rabbits or model ships? How could two guys talk without whittling on a piece of wood just to watch the shavings hit the ground?

Like many knifemakers, I made a great number of my first knives in school shop classes. In making knives, I gleaned as many skills as were acquired through other projects. I worked with steel, wood, leather, and brass, and silver soldered, sanded, shaped, polished, and designed with the best of them. I would have been years ahead in my craft, had it not been for the school board's decision to ban knifemaking in school. At first I held quite a bit of resentment toward my shop teacher, Harry Slater, for letting it happen. I naturally blamed him as he was the messenger who told me I could no longer make knives in school. Years later, I learned that he tried to persuade the school board to allow the pursuit of *any* art or craft that motivated students to develop individual skills but was voted down and, rather than lose his job, went along with the board's decision.

Today, knives are considered contraband in most of the nation's schools. Children are severely disciplined for simply having a blade in their possession. It matters not what purpose the knife was to serve; nor does it matter that the reason for the new rules against knives were based on incidents involving an extremely small percentage of children who used to carry knives. The fact of the matter, I believe, is that the rules are a direct consequence of the national news media and its

distorted ability to sensationalize all negative events to the extent that a population which actually knows better decides it had better do something to absolve itself of blame, no matter how misplaced the action or how great the final cost to the community.

Foundation Of America

The public schools have been teaching the nation's children for more than two centuries. The lessons taught along with the Constitution and Bill of Rights have made America the greatest country in the world. U.S. productivity stems from a firm belief and dedication to the ideal that all men are born with the right to pursue legitimate dreams free from the shackles of government.

The schools were designed to teach children the skills needed to build the communities in which they live. Still, national standards of education are set that fail to take into consideration the skills necessary to succeed in all communities. Visit the farming and ranching areas of the country and look at the available jobs. They differ greatly from those in the big cities. Still, should the people lose the skill to produce food, clothing, and shelter from the raw materials of small-town USA, the going will be tough for all. The skills of the common man, working with his hands, are the foundation of America.

The most important lesson I learned in school was the ability to read. Along with the development of that skill, I accidentally learned what to read and what to ignore. Long ago I discovered the misplaced values of a news media that would rather sensationalize and distort events for the purpose of selling newspapers and capturing air time—no matter what the cost to the people's peace of mind—than

report events with a sense of perspective.

I feel that an essential element of the school curriculum should be aimed at teaching the individual to recognize the unprincipled use of news to prejudice the community toward displaced values. While I most strongly support the doctrine of freedom of the press, I cannot condone attacks on other aspects of the American way of life and the Bill of Rights. When guns or knives are blamed for events rather than the individuals who abuse their rights, all men are robbed of a way of life while allowing the simpleton who abused the rights to continue

"When knives are banned in school, from where will tomorrow's cutler come?"

his predatory efforts on the quality of existence for all men.

The Solution

There's a solution to the issue of violence. After all, it was the press that glorified the first sky-jacking, the first drive-by shooting and, more recently, the first school shooting. If regular television programming is to be rated as to the content that's violent, sexual or inappropriate for children, in order to protect children, the *news* should be subject to the same rating requirements. This simple application, had it been in force years ago, would have avoided many copycat crimes that followed the initial incidents. The press would be

**“When guns or
knives are
blamed, all men
are robbed of a
way of life.”**

forced to find and enhance the good news of America. Then, the day would come when the criminal who commits the most despicable act would face justice alone without national attention, and none would seek to share in his so-called glory.

The fact that the knife is an essential part of people's lives, as well as an object of art and crafts-

manship, does *not* need to be argued here. The upstanding citizens of the world are well aware of that fact. As noted, many knifemakers made their first blades in school. When knives are banned in school, from where will tomorrow's cutlers come?

Dealing With Droughts in the World of Knives

Survival in the blade business has many parallels with survival in general

While they may at first appear diverse and unrelated, many aspects of life are in fact very similar when examined carefully with an eye for lessons to be learned.

The area of Wyoming in which I live is now experiencing the worst drought in recorded history. We have received less than two inches of precipitation this year and last year was just as bad. Some ranches and farms that have been in the same families since the Homestead Act of 1862 and which have weathered many hard times may be forced to sell out. Some families, lacking tenacity in the face of adversity, will split up. Others of

integrity who honor such outdated concepts as commitment through sickness and health, for richer or poorer, and for better or worse will go on to other challenges as a team and face them together. Whether successful or not, they will be united and know true prosperity.

Over the past two years, a neighbor and I have discussed many plans designed to put our ranching operations together. Each plan has met with that special kind of resistance called *hard facts*, carefully groomed by Mother Nature. Finally, we arrived at a plan that is flexible, workable, and to the benefit of all. One way or another, we will make



Knife companies such as Case, Spyderco, Buck and others have weathered the hard times to persevere in the world of knives. Among the latest offerings from Buck (attn: C.J. Buck, Dept. BL10, POB 1267, El Cajon, CA 92022 [619] 449-1100) are the DiamondBack hunting/utility fixed blades with "high carbon martensitic stainless" blades and Kraton handles. Overall lengths: 9 1/2 and 7 inches. Respective MSRP's: \$28 and \$24. (In case you're wondering, the rattler is not one of the author's "pets.")

it work. We are both absolutely committed to doing our part to keep the family-owned outfit a reality. The secret is honest dedication, knowledge, flexibility, and faith.

The world of knives may face droughts of its own, created not by Mother Nature but by that elusive brass ring known as economics, or by partners who lose sight of the goals that brought them to the world of knives in the first place. Some will worry, stick their heads in the sand, or seek greener pastures. The challenge for individuals devoted to the knife industry is to survive any hard times that may come their way. Those who have the desire will survive. It may be a little lean for a while but, with creative planning, people can not only survive but also prosper in the face of adversity. Just like in the natural world, some special individuals never notice the drought; they simply adapt to the different conditions of life and prosper.

Cull or Be Culled

Because of the short feed supply, we have been forced to cut down the number of cows we run here on the Willow Bow Ranch. I know the specifics of all the cows in the herd. I can remember the day they were born, their mothers, grandmothers, sisters, and daughters. When you run cows, you can

get to know them well. Each cow carries her own special memories such as a broken fence, cold nights, and good times shared.

I asked my partner to do the culling simply because I didn't want to look the cows in the eye when I picked those to go to the sale barn. He said he would do it for me. After he made his choices, he asked me to check the culls. As I walked through them, I asked why he culled specific ones. Each time he had a valid reason. Some in the knife industry also will be culled in hard times for many reasons, some not their fault.

After we had finished branding the calves from the cows we were going to keep, I noticed that, in all probability, we are now running the finest bunch of cows ever to walk the Willow Bow, having culled those who, for one reason or another, didn't measure up to the better cows in the herd. Likewise, knife-makers should take a critical look at the knives they are making or trying to sell and cull those that for one reason or another don't pay their way.

Should the knife industry come to know the effects of a recession, some makers and manufacturers will leave the ranks to pursue other interests. Those makers and manufacturers who are absolutely dedicated to making knives and providing services of which the industry can be proud will survive.



India's export ban on stag caught some makers off guard, though if James Rodebaugh's San Gabriel hunter is any indication, he's not one of them. The handle is stag and cocobolo and the 3.5-inch blade is 1084 high carbon steel. His address: Dept. BL10, 9374 Joshua, Oak Hills, CA 92345 (760) 947-7772. (BladeGallery.com photo)



Along with George Herron, Daryl Meier and others, knifemaker Glenn Marshall has "fought the good fight" through good times and bad in the knife business. Glenn's 70-Year Commemorative Knife recognizes his seven decades of knifemaking. The 5-inch blade is 440C and the handle is amazonia rosewood. The display box comes in mesquite or maple. His address: Dept. BL10, 305 Hoffmann, Mason, TX 76856 (915) 347-6207.

Survival requires keeping your ideas alive and well in the world of knives. This is a time for creative advertising, for those makers and manufacturers who don't advertise will be soon forgotten. Those who keep their dreams alive and well during what some may call hard times will recognize them as times of opportunity and will be first in line when good times return.

A drought being experienced by the knife industry is a lack of stag for handle material. Some knifemakers planned ahead and laid in a supply of stag to carry them through a "hard winter" and have been little affected by the drought. Others are in trouble. I have enough sheep horn and other materials on hand to last me many years. I fail to understand how some can allow themselves to be caught short. Survival requires planning and, sometimes, sacrifice. The new shop or pickup can wait; with no handle material, the maker is out of business. It's simply a matter of foresight.

Handling Hard Times

I'm always glad to see the return of the swallows in the spring, for their graceful, honest presence has come to represent times when the living is easy. Still, I have a special fondness for the coyote, pheasant, rabbit, and deer that stick with me through the sometimes-hard winters. We have knife companies such as Case, Spyderco, and Buck, and individuals such as George Herron, Glenn Marshall, and Daryl Meier, who have been prominent in and contributed to the world of knives through many "hard winters." There are, of course, many others, too numerous to list here, who also have contributed.

In good times, there are thousands of swallows sweeping mosquitoes from the fields. Due to the vast numbers of the birds, I get to know very few as individuals. This year, I'm able to share time of greater quality with a single pair of swallows who chose to nest under the bridge near our home. I watched as a starling decided to harass the male

swallow. At first, I was concerned for the swallow's safety, then overjoyed to watch the little fellow work the much larger starling over with an amazing display of aero-acrobatics. Feathers dropped to the ground and the starling departed.

Columbia River Knife & Tool recently fought and won a battle with the Portland office of U.S. Customs that was of benefit to all in the knife industry. In this case it was a battle between the swallow (CRKT) and the hawk (Customs). The hawk lost! When you see the folks from CRKT, say thanks, and join the American Knife & Tool Institute as soon as you can, for your vote can count when all knife enthusiasts combine forces. An individual membership is \$35 and a good investment in the future of the world of knives.

The challenges of hard times provide an opportunity for the dedicated knifemaker to prove himself and be noticed. If you're a knifemaker, attend knife shows, do your best work, and take it to the showplaces of the knife community. Like the male swallow, your individual ability will stand out.

Those who enter the world of knives and fight for recognition with dedication to ideals beyond immediate profit and loss will remain its cherished citizens, and the world of knives will be better for the hard times. You read about the manufacturers who won the Blade Magazine 2001 Knife-Of-The-Year Awards by a vote of their peers. These are the kinds of staunch citizens of the world of knives I'm speaking about.

I've just returned from the 2001 BLADE Show. It was absolutely the best BLADE Show I've ever attended. Customer traffic and sales were heavy from Thursday through Sunday. I don't believe that I've ever seen a more enthusiastic gathering in the world of knives. The excitement was contagious and reached all with whom I spoke. Many discussions about knives took place in and around "The Pit"—the sunken bar of the Renaissance Waverly Hotel—until the point of absolute and total exhaustion took its toll.

While some aspects of the economy may be experiencing hard times, if the BLADE Show was any indication, there's no drought in the world of knives.

Code of the Cutler

Some things to consider when looking for makers' knives that hold their value

During a discussion with Paul Basch, buyer and seller of blades for A.G. Russell Knives, I asked about the mistakes knifemakers commit. One of Paul's thoughts was that makers fail to take the knifemaking business seriously. He said that in order to become successful in the world of knives, a maker should set aside a portion of the proceeds from the sale of every knife toward the promotion of his blades—and the easiest and most direct method of promotion is advertising.

Some makers seem to feel that if they advertise, it's some kind of social disease or admission of poor sales. I see it differently. I have advertised in *BLADE®* on a regular basis since my first article appeared in the August 1988 issue. There were some slim times when all I could afford was a short classified ad, but advertise I did. At first, the ads were designed to sell knives and then, when my video and book became available, the ads included them.

I still advertise on a regular basis. Why? First of all, advertising makes the Fowler knives that my clients have bought more valuable because the advertising increases demand for my knives that are available. I feel that this is one way of paying back those friends who have bought my blades over the years, many of whom I will never meet, who had the faith in my abilities and supported my voyages into the frontiers of the high-performance knife. Without their financial support and shared thoughts, the improvement of my knives never would have happened.

Second, I wish to promote my ideas concerning the forged blade, not only to those who will seek to share the knives with me but, I hope, to inspire other makers who may join in the development of the high-performance blades of the future. Throughout the

time man has lived on Earth there have been millions of knifemakers, all working on their own, making their individual discoveries and advancing the art of the high-performance knife for a short while, only to be forgotten as time passes. Today, the surface of the knowledge that has been forgotten hasn't even been scratched. I don't ever want to see such a loss of knowledge occur in the world of knives again.

If a knife has the maker's name on it, folks will come to feel as if they know the maker and his/her knives. This 9 3/4-inch cable-damascus tanto is by Robert Douglas. His address: Dept. BL12, 29 Castor, Ottawa, Ontario, Canada K1K 2H5 (613) 842-4237 rlsdouglas@home.com. (PointSeven photo)

Another reason to continue advertising is that new folks to the world of knives may not have seen an ad that appeared years ago. There's a need to keep the enthusiasm fresh among as many enthusiasts in the world of knives as possible, and ads help in this regard.

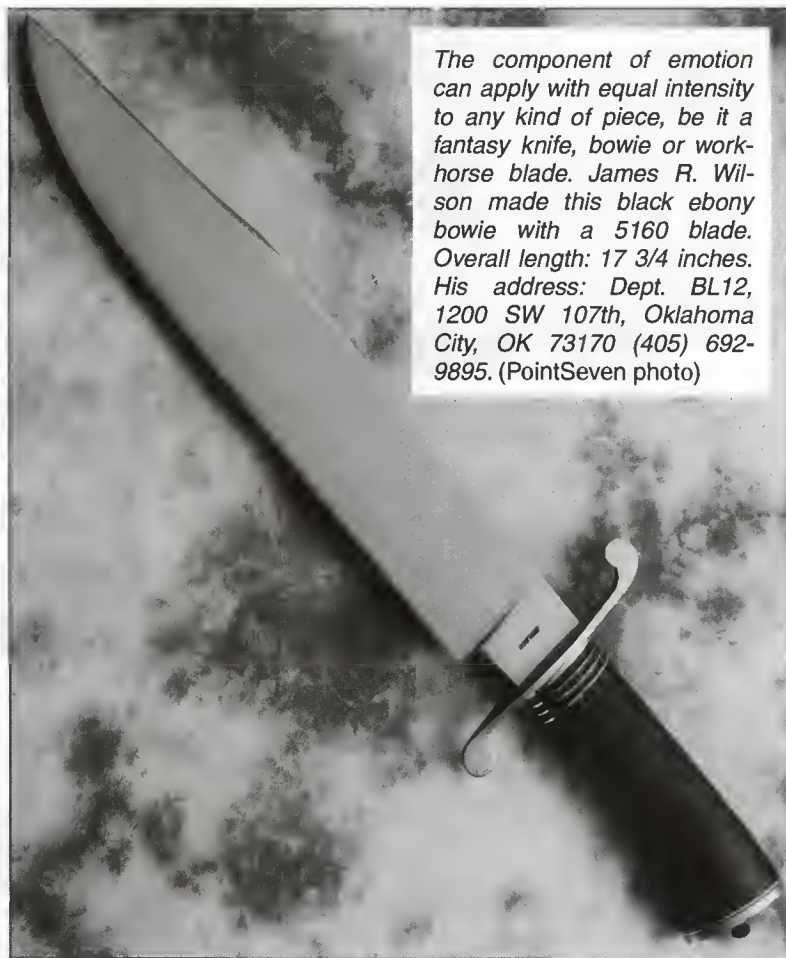
Creative advertising, while maintaining honesty and having that "something special" to offer, tends to increase the probability that an investment on the part of the consumer will be a wise one. Makers who have something worthwhile to offer will share the positive aspects of their



knives, devoid of the smoke and mirrors of deception. The knives will have qualities that are special to you. If the knife is of a nature that creates an emotion when you see it, feel it or use it, if it touches you, it will touch others—thus is the essence of art. In your hand the knives will speak of the nature of the maker and the function for which they were created. Knives that qualify in this manner are likely to be wise investments. The more you read about the essence of the makers' knives, the better. The future icons in the world of knives will stand on more than name or title; their knives must have that special quality of emotion. The component of emotion can apply with equal intensity to any kind of knife, be it a fantasy knife, bowie or work-horse blade.

Bob Brownell of Brownell's gunsmithing and knifemaking supplies gave the following advice in one of his *Gunsmith Newsletters*: "Advertising should promote the man and the business as one." In an advertisement for Acme Doorknobs, for instance, the name of the advertiser might seem to represent an impersonal company. On the other hand, if the company name is that of a person, such as Al Olson's Door-knobs, you at least know with whom you are dealing. When you call Al, you already have a feeling that you are acquainted with him and a feeling of trust is established from the start. The same goes for knives. If they have the maker's name on them, folks will come to feel as if they know the maker and his/her knives. This is a good thing.

Photographs of knives are one of the best means of promotion. There are some true professionals in the world of knives who can provide quality photos of knives that will communicate the maker's talents to thousands of readers through just one magazine. Of course, makers may choose to take their own photos if they are so inclined, and some are quite good at it. The makers should arrange to have such photos sent to their favorite magazine(s) on a regular basis. It should be stressed that in order for the editor to include the photos in the magazine, they must be top-of-the-line, magazine-quality photos. Through the years I have invested more than \$4,000 in photographic equipment, an investment that has paid for itself many times over. Photographs of knives record a maker's progress, as well as enhance the communication between the maker and his clients.



The component of emotion can apply with equal intensity to any kind of piece, be it a fantasy knife, bowie or work-horse blade. James R. Wilson made this black ebony bowie with a 5160 blade. Overall length: 17 3/4 inches. His address: Dept. BL12, 1200 SW 107th, Oklahoma City, OK 73170 (405) 692-9895. (PointSeven photo)

The Maker-Client Compact

Brownell's offers an unconditional guarantee on everything it sells. By the same token, a knife-maker's guarantee can enhance his image as well as the quality of his knives. When things go wrong with a knife, the guarantee will increase the probability that the maker will be among the first to know and be afforded the opportunity to fix it immediately. This is the reason I have, from the very start of my knife business, offered an unconditional guarantee on my knives to the client's satisfaction for my lifetime. If for any reason the client doesn't like the knife, all he need do is return it to me for repair or a refund.

Such a guarantee provides several benefits. First of all, the client has no reason to feel uneasy about purchasing the knife; he knows his investment can be immediately reclaimed. Second, though the maker does all in his power to maintain high standards of quality control, he is only human and works primarily with varied materials. Hence, there's always the possibility of error. Clients who use knives will put them to the test, some in ways

the maker never considered. The maker can benefit from the clients' experiences through a guarantee, for the guarantee opens the door for communication between client and maker. Should some fault show up in a knife, the guarantee helps insure that the maker will be provided the opportunity to identify the nature of the weakness and avoid similar failures in the future. In addition, the bond between client and maker remains favorable.

Both of my grandfathers were men of their word. They died with smiles on their faces. Mutual trust is a quality that must be nurtured in the world of knives. When a client purchases a handmade knife, he acknowledges his trust in the maker. I feel that a maker owes his client nothing less than absolute trust in his evaluation of that knife. The maker's word and his commitment to the quality of the knives he sells is his greatest asset.

The maker should always openly reveal the nature of his knives. If they are intended as art and aren't up to tough use, the maker should tell the client and potential hard feelings will be avoided in the future.

Reply ASAP

When makers receive a request for a brochure, book or video, they should make every effort to honor the request within as short a time as possible. I'm always amazed when clients state that they requested information from a maker and never received a reply. Sometimes either a request is lost or gets placed in a pile on my workbench, but most of the time anyone who asks gets a response the next day.

Makers can promote their knives locally and help fund-raising events at the same time. Donations to

organizations such as Ducks Unlimited, the Elk Foundation, a local shooting club, or an NRA fundraiser will be of benefit to all. Many makers got their start selling knives at local gun shows or craft fairs.

Makers should attend every knife show they can. It's their chance to learn and personally get acquainted with the knife community.

One problem with knife shows is that all makers are in the world of knives because they love all things

that cut and, when they go to a show, they're likely to act much like a kid in a candy store, spending time visiting other makers, and looking at their work. One thing I learned the hard way is, when I have a table at a knife show, it's my responsibility to be at my table. People pay to attend a show and the maker should be at his table to greet them. The maker should stand as long as he can, smile, and welcome

show patrons to his table as they approach. When the maker's knees give out, it's OK to take a break. Most patrons will understand but, when they show more than a passing interest, the maker should stand, apologize for sitting, and greet them warmly.

Another goal of mine is to bring enough knives to the show so that the last client to visit my table will have the opportunity to see my work. I never quit a show early and am not a bit ashamed to be the last to pack up and leave.

No single event concerning the promotion of a maker's knives is likely to result in immediate consequences. It's like skinning a cow; you get the job done one slice at a time. The results of each and every effort the maker puts forth are cumulative, each supporting the rest. One day, with the help of his clients and friends, he will achieve the place he has earned in the world of knives.

"The guarantee opens the door for communication between client and maker."

The Searchers

*You and the knifemaker seek the same thing—
mutual appreciation for knives*

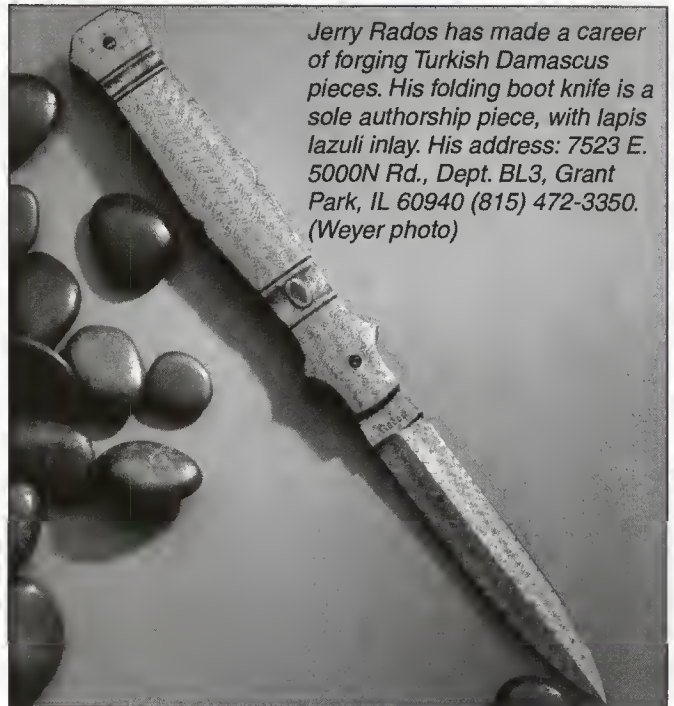
Editor's note: While the following is written to knifemakers by a knifemaker, the tips and information provided can be used to help you identify a maker who includes your best interests in the mix when you obtain a knife from him/her.

An old maxim in the field of economics, Ricardo's Law of Comparative Advantage, suggests that you should do what you do best to increase the likelihood of your success. If you're a knifemaker in search of success, first and foremost make what you're good at making. When your product is good and you know that you're proficient at making it, selling it is easy. You'll be confident, and as a result, you'll nurture confidence in your clients.

Go to knife shows. Shows provide you the opportunity to meet and sell your product one-on-one with your clients. Shows also provide you the chance to visit with other makers and meet some of the old-timers and new guys alike. Many lasting friendships and mutually beneficial relationships get their start in the lobby of a knife show. By looking at the knives other makers are making, you'll have the opportunity to judge your talents realistically. Like ancient China, you can all too easily build a wall isolating yourself from the rest of the world and find out that progress has passed you by.

Don't rely on the show promoter to do all the advertising for you. The ad budget for a knife show can only be stretched so far. You can do your part to make shows more successful. Mailing simple postcards inviting clients in the area of a show to attend it can be a personal gesture of good will. What's more, by advising your clients in the area that you'll be there, you'll bring proven supporters of the blade to the show. They in turn may bring friends and introduce them to the world of knives, and everyone concerned benefits.

Should one of your clients ask your advice on another knifemaker or style of knife that you don't



Jerry Rados has made a career of forging Turkish Damascus pieces. His folding boot knife is a sole authorship piece, with lapis lazuli inlay. His address: 7523 E. 5000N Rd., Dept. BL3, Grant Park, IL 60940 (815) 472-3350. (Weyer photo)

make, don't be afraid to recommend another maker (though do your homework and make sure that the maker you recommend makes a representative example of that style of knife). The entire cutlery community gains by cooperation and mutual respect.

You can, as many do, hope that you'll be "discovered" and great things will happen automatically to bring your talents into the spotlight. This can and does happen, but only rarely. Most successful knifemakers got where they are by long hours, hard work, tenacity, and creative methods of selling their product.

Ad Power

Advertising in the knife publications is the most reliable method of getting your name and product in front of the most interested devotees of

the custom blade. I've seen some great knives at shows, the makers highly talented, everything on their table indicating they'll be a success in the world of knives. All too many times they disappear, never to be seen again. They fail to get their message heard. They did *not* advertise.

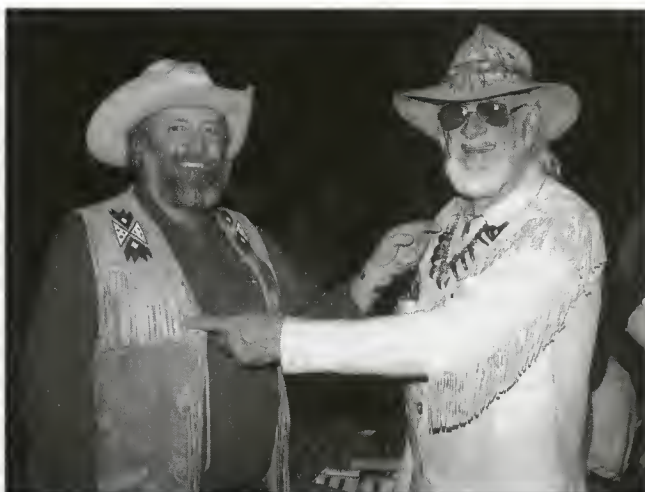
One advertisement can reach more clients in one issue of a knife publication than you can personally contact in years. Should you not be able to afford a display ad, "Blade List" in *BLADE* affords you an excellent opportunity to get your product some recognition for only 40 cents a word. Should you choose to run the classified ad for more than seven issues, you can receive a 20 percent discount. I consider this opportunity a bargain. [The aforementioned rates are subject to change. Contact *BLADE* (715) 445-2214 for more information].

Incidentally, Bob Brownell, founder of Brownells Inc. (515) 623-5401, an excellent supplier of tools for the hobbyist, gunsmith or professional knifemaker, once advised in his newsletter (I'm paraphrasing here): "Name your business with your name; your name is what you must sell if you're going to be a success. Marble's, Remington, Winchester, and Smith & Wesson are all examples of the success possible when your name is on your product."

Consignment sales can get your knives to shows that you couldn't possibly attend. Be sure that the purveyor understands your product, and don't be bashful about written agreements and receipts. With most of the genuine dealers in the world of knives, this may not be necessary, but records can become an absolute godsend should one of the parties fall victim to an illness that affects his memory, an accident or an untimely death. A.G. Russell, Paul Basch (who works for A.G.), and Bill Claussen (Northwest Knives & Collectibles) are true purveying professionals. In my experience they can be trusted absolutely. Their word is their bond.

Communicate Quickly

When someone inquires about your knives by letter or phone, answer him/her immediately. Angie and I make every effort to respond to all inquiries within 24 hours. We always return phone calls as soon as possible. Many times prospective clients remark, "You're the first one to answer my request," and have become good clients and friends largely as a result. There's no excuse for ignoring people who have expressed an interest in your knives. Should they wish to order a knife you don't want to make, be honest with them,



*Shows provide you the chance to visit with other makers and meet some of the veterans and new guys alike. Here the author compares "skins" with knifemaker and knife thrower Dan Dennehy, a founding member of The Knifemakers' Guild, at a past *BLADE* Show.*

decline to make the knife and refer them to another knifemaker you respect, and who you feel may be willing and able to make the knife they want. Then call the knifemaker and advise him of what's transpired. This interest and concern on your part will enhance the standing of the knifemaking profession.

Some individual clients may be especially obnoxious, and you have no way of knowing what makes them the way they are. However, everyone with whom you come in contact has the right to be treated with respect and dignity. Make this your rule and, in the long run, you may make the client's life a little better. Meanwhile, you'll feel good about being able to meet the challenge provided you.

One of my best clients drove me nuts for years before he started buying my knives. All he was doing was satisfying his doubts. It's very easy to consider questions as challenges to your abilities, though this isn't

always the case. Some people don't communicate well and, as head of your organization, it's in your best interest to make the most of every opportunity to communicate effectively.

One day, if you stick with making knives, you may get a call from a writer for an interview. You should be prepared for this event. While making knives, think about what you want the writer to say about you. Read interviews of other knifemakers

**"Your name is
what you must sell
if you're going to
be a success."**

—Bob Brownell

The packaging of a knife in the most attractive format possible accentuates its appeal across the board. Wade Colter's friction folder boasts L6 and 1090 forged blade steels and a water buffalo horn handle. His address: POB 2340, Dept. BL3, Colstrip, MT 59323 (406) 748-4573. (Gallagher photo)



and take special note of the comments you wish to avoid. Your interview should be genuinely positive. There's little to gain by putting down other knife-makers. Give credit to those who've helped you and speak of the individual, unique qualities of your knives. I strongly suggest that you write your own "interview," and review and revise it until it says what you would like it to say in preparation for the actual interview you hope to one day experience.

Should the writer ask you questions for which you're unprepared, be honest with him, tell him you'd like a little time to think the answers over, and then get back with him in a timely manner.

Readers will remember what you said. If you make an error or change your mind about a particular issue, that's OK. You're human, thankfully, and so are the rest of the citizens of the world of knives. Don't be afraid to change your mind.

Pictures Make Perfect

As you make knives, photograph the ones you like best. Select a good knife photographer and talk with him about the message you want to communicate through the photographs. An alternative or supplemental approach is building an investment in photographic equipment and technique yourself. With practice and a lot of reading in the field of photography, this can provide you with quality photographs that are readily available.



As Fowler notes, cutlers should make what they're good at making. Earl Witsaman is good at making miniatures. This miniature repro of one of the author's hunters comes complete with a sheep horn handle. Overall length 2 1/4 inches. Witsaman's address: 3957 Redwing, Dept. BL3, Stow, OH 44224 (330) 688-4208. (Weyer photo)

My photographic equipment has been carefully selected over the past 20 years at an expense of less than \$3,000, excluding the items I thought I wanted but didn't need. The benefits from having the photos available greatly exceed the cost.

Consider the knife images you form for your ads and other promotional materials on the basis of the messages created by the big advertisers of industry. Every advertisement you see, read or hear can provide you with an example of communicating the message you wish to send. Use the big advertisers of industry as an inspiration when you create the image you want to communicate to the world.

BLADE has an exceptionally creative advertising department under the leadership of Steve McCowen. McCowen & Co. will be more than willing and able to help you with your advertising needs. Should your budget be tight, an ad in "Blade List" is inexpensive and a good place to start.

Actively seek feedback from your clients. What they like about your knives provides you with personal satisfaction. What they don't like may be the trail into the frontier of a better product. Standing behind your knives and offering a generous guarantee is good advertising, instills confidence in your product and builds a positive relationship with your clients.

If you make an honest knife, stick with it, and apply the knowledge you gain over time. You'll find that selling blades is the easy part. Making them will become the issue. The freedom and personal satisfaction you gain from doing what you want to do is the reward.

The Coming Crisis in Knife Leadership

Knives that function are one thing but will future generations know how to use them?

Recently I was asked why I have not left the realm of the functional knife and started making the more high-ticket art knives. My answer was simply that I feel that dedication to the high-performance functional blade is too important to abandon.

I have just finished reading Jeff Cooper's excellent book, *To Ride, Shoot Straight and Speak The Truth*. I found his thoughts highly enlightening and was encouraged to find some reality remaining in American literature. Though Cooper's emphasis was on firearms, it doesn't take too much thought to correlate the concepts to the world of knives, politics, and government that nurture a creative and productive society.

"Dedication to the high-performance functional blade is too important to abandon."

All too often, the men who design, buy, and provide knives, firearms, and other such hardware for the U.S. fighting man who must meet the enemy one-on-one—namely the infantryman—come from a world differing greatly from the man in the trenches. Their experience springs from the classroom and ivory tower world of logistics, supply, and theory. In short, they are educated beyond their intelligence. This historical phenomenon repeats itself many times. Otherwise, America would have lost the Revolution and still be subject to the British Parliament, and the Constitution and Bill of Rights would have never been written.



Historically speaking, when it comes to a true all-around functional knife, it's hard to beat the kabar, made in various versions here by, from top, Pal, Robeson Shuredge, Ka-Bar, and Camillus.

At one time, warriors and leaders like Washington, Lincoln, Mosby, Grant, Lee, Patton, and Rommel were well-grounded in the basic requirements of men who knew how to win wars one individual fight at a time, hand-to-hand and face-to-face, on the battlefields of history. Men such as these, in spite of social status, learned the basics of battle and survival while in their childhood.

For instance, in his later years, John Singleton Mosby—a Confederate officer famed for his Civil War

exploits—became friends with George S. Patton, who at the time was but a boy. While the two rode horses together, Mosby related facts about the tactics that won many battles of the Civil War. Mosby on his horse and young Patton on his pony, "Peach Blossom," staged many mock battles. Patton learned well, and his early indoctrination to winning in warfare made him the Allied general most respected by the German command during World War II.

Ernie Pyle, World War II correspondent and author of *Brave Men*, wrote about the true nature of the life of the infantryman in battle. There were no frills, just the bare necessities and basics of self-preservation. While individual survival was at times based on luck, self-preservation for many and winning the war depended on the most basic survival skills. Living in the worst extremes, be it

"That the knife was so common in its role providing the basic necessities to survival is not often mentioned."

a sea of mud, cold, wet, or hot and dry, foraging for food while supplies were held up, the skill and drive necessary to survive and win came from within the individual. Men who can master these skills instill confidence in their fellow men.

The fact that the knife was so common in its role providing the basic necessities to survival is not often mentioned. The inability of men to meet the basic needs for self-preservation has many times been the most significant factor in determining the surviving culture.

Independence vs. Dependence

I fear that America is in danger of becoming a nation of individuals dependent upon others. The government pretends to be "the people's shepherd." It promises to protect, to teach the people what they need to know and feed them, no matter the cost. As a result, the people are subject to many unnecessary laws and incur economic and social costs that far outweigh any benefits they may provide.

As I see civilization "progressing," I wonder from where the warriors (I do not use the word *warrior* solely in the context of man fighting man but to include all leaders of merit) and survivors of

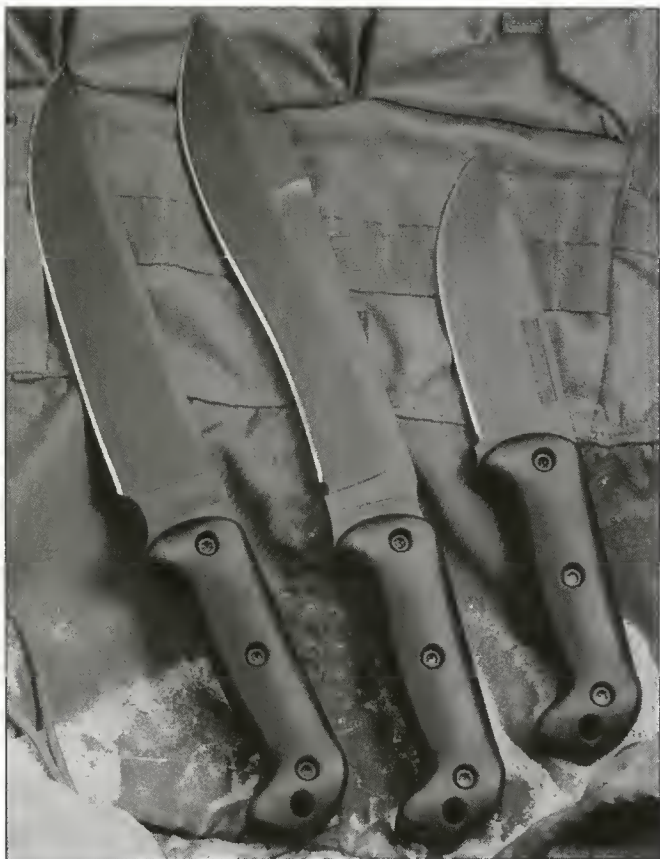


The author grants that the knife is also an art form and art is an essential part of civilization, but he still has his reservations. This striking folder is by Charles Dake. (Point-Seven photo)

tomorrow will come. It can be argued that warfare has entered the new age where technology will outdate the skill of the individual man on foot. This may be so, but should technology reduce civilization to the level where individual competence with a firearm and an honest knife become paramount to the survival of the species, I sincerely hope there will be some armed with the basic skills required.

I fully realize that man is at a point where the basic survival skills and tools are rather boring to the majority of civilization. The firearms magazines have all kinds of new whiz-bang technology. Laser range finders and fancy scopes have taken the place of learning how to estimate distance and knowing the trajectory of a bullet.

National defense is by necessity more concerned with hi-tech weapons, and the basic skill of marksmanship is less a concern than firepower. It is believed that it is not possible to economically teach fundamental skills of marksmanship to the average recruit. Therefore, thousands of bullets have replaced one from the hands of a true marksman.



(From right) The BK&T Companion, Brute and Magnum Camp all feature blades of Camillus' proprietary 0170-6C high-carbon steel, Rockwell hardnesses of 58-59 RC, black epoxy finishes and flat grinds. The backpack is the 'Patrol Pack,' designed by Ethan Becker for carry by military personnel in wilderness settings and a favorite of SEAL and Army Ranger RTOs (radio telephone Operators).

In order to prosper, the knife industry must follow suit if it is to maintain or enhance its economic well being. Hi-tech folders, space-age steels, and beautiful damascus blades, along with unlimited fantasy gadgets and designs, are a necessary part of the culture, as the knife is also an art form and art is an essential aspect of civilization. I have no grudge that this is the way it is. I am concerned that the knife industry as a whole does not lose sight of the difference between the knife as an art or fantasy object and as an honest tool.

Foremost Tool

Some of the greatest authors relate situations of where the basic knowledge of and skills necessary to survival are well thought out. Edgar Rice Burroughs in his *The Return of Tarzan* epic depicts Tarzan shipwrecked on his home territory, naked and alone, facing the challenge of survival at its most fundamental level. The first tool Tarzan seeks is a knife, for with a knife he can produce all that is necessary to survive.

In a world of space-age technology, it is all too easy to forget the significance of a knife, for science many times dulls the perspective of humanity.

In *Walden*, Henry David Thoreau notes the value of basic knowledge. He poses the question of two youths. One goes to school and studies metallurgy and is given a Joseph Rodgers penknife for graduation. The second sets out on his own, reading what is necessary, mines and smelts his own ore, makes his own steel and creates a knife from his own hand. Thoreau then asks, "Which would be most likely to cut his fingers?"

I only hope that some of *BLADE's®* young readers are inspired and have the opportunity to learn the difference between art, fantasy, trinkets, and the basic tools of man's survival. As parents and teachers, you are most responsible for your children's education, for if you leave it up to the public schools and others, your children will be ill-prepared for all potential aspects of their future. That future must ensure an appreciation for nature and the skills necessary to survive any possible situation should events unfortunately allow only the slightest probability of survival of but a fraction of the population. The commitment to truth in all relationships, and the ability to know the difference between deception and honor are the basic tenets of nature that nurture freedom, independence and creativity.

In order to ensure the future of competence with nature, knives, and all tools of survival, you must be not only willing to vote to sustain your views, but it is of absolute necessity that you support your vote with all your influence in a direction that guarantees freedom from excessive government, the shackles of deception, and dependence on others in place of self-reliance. Each of you must enthusiastically support the legacy you inherited in order that your children will be prepared to ensure that a government of the people, by the people and for the people, and the species of man, will survive. The many institutions that at one time helped to supply this inspiration are abandoning this need—even the Boy Scouts of America have abandoned the fixed blade!

My suggestion: Take a kid on a field trip this weekend and show him what a knife is all about. Do your best to ensure the future appreciation of knives as man's most basic tool of survival. Teach the child to work with the knife, sharpen it, care for it, and come to know the significance of blades to man, yesterday, today and, hopefully, tomorrow. While you are exploring together, speak of ethics, the value of truth, and responsibility. Your efforts just may keep man off the endangered species list.

Friends of the Knife

The author thanks BLADE and BLADE readers for a most rewarding experience, as well as experiences to come

Twelve years ago—it seems like only yesterday—I received a call from Steve Shackelford, then managing editor of *BLADE*. Steve stated that Bruce Voyles, then the magazine's publisher and editor, had read one of my brochures and felt that, "I had something to say, and would I be interested in writing for *BLADE*?"

It took awhile for what he said to soak in, and I felt both honored and apprehensive. Honored, as I had read every issue of *BLADE* and knew that it was the premier focal point of the knife industry. To be asked to write about knives for *BLADE* was a dream come true. As for being apprehensive, I believed that I had a lot to say about knives but knew beyond a doubt that what I had to say was diametrically opposed to much of the information that had been written up to that time by some of the very prestigious "authorities" in the world of knives. Also prominent in my thoughts was the fact that I cannot spell and am pretty poor when it comes to textbook English.

I voiced my concerns and Steve told me that he could attend to proper spellings and so on. He suggested that I should simply give it a try and submit an article to him. We decided on the general nature of the article and I went to work. My first story was written on my vintage 1956 electric typewriter, and cut and paste were accomplished with a pair of scissors, Scotch tape, and the photocopier at the local drug store. Several hundred hours later and my first knife article, "Can Your Knife Cut It?" was in the mail. The article came out in the August 1988 *BLADE* and, rather than the hostility I expected, was well received.

Since that time, I either have developed or have participated in the development of many articles, a book, and a video about knives, and the people who love and use them. *BLADE* always has been blessed with the cream-of-the-crop of friendly, pro-

fessional folks to assist the new knifemaker or writer in achieving his dreams. I decided to invest the revenue from my writing in advertising in *BLADE*, and it has been tremendously successful for me. I have a long waiting list for my knives and have sold many books and videos. Most importantly, I have been able to share my thoughts on the nature of a truly high-performance blade with many more people than I ever thought possible. *BLADE*'s subscriber and newsstand base ensures that the message will be heard by many friends of the knife. I consider my decision to advertise in *BLADE* the best investment I could have made in my career.

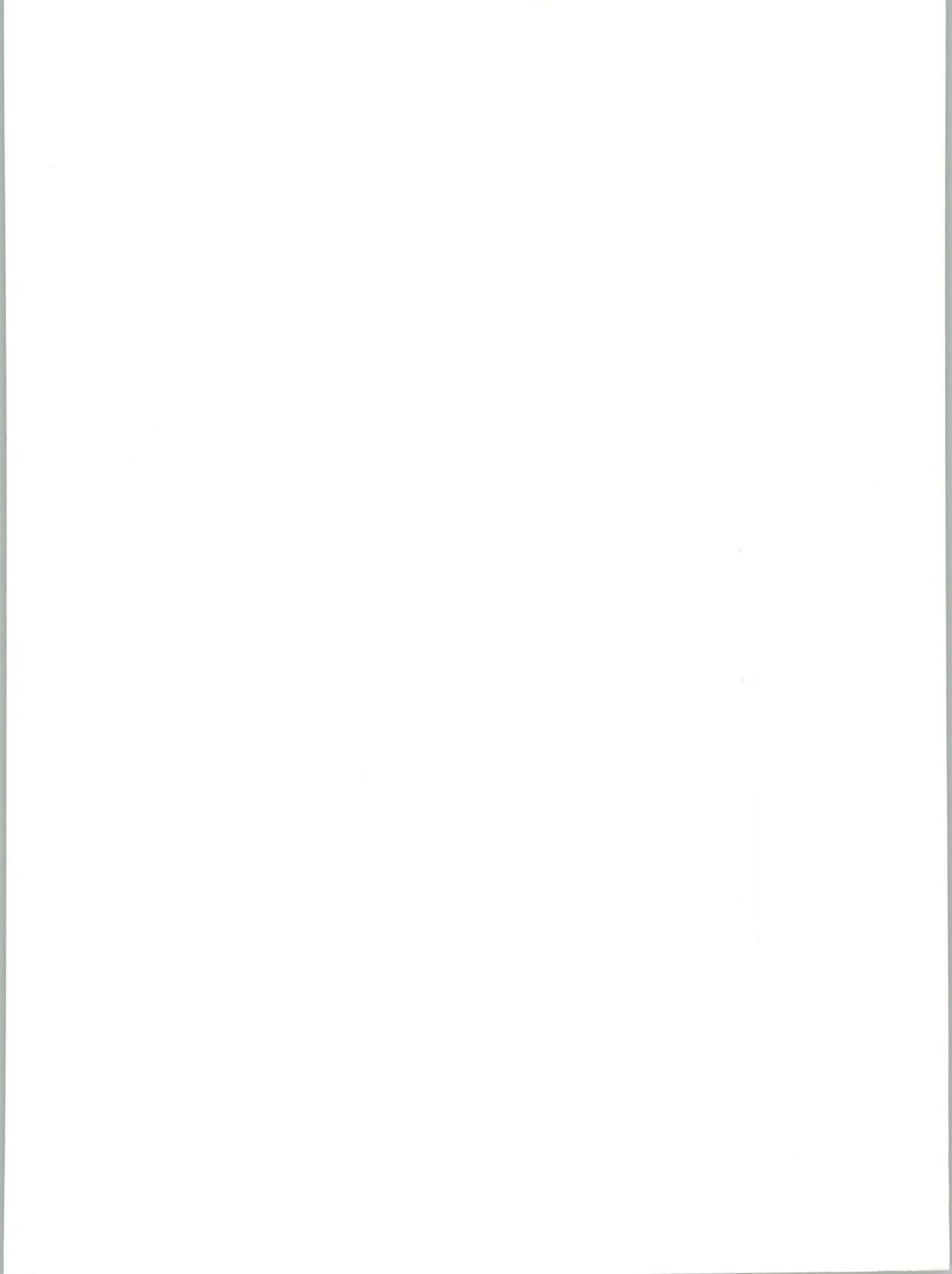
I do not feel that my thoughts are new or novel, but hope that they represent the thoughts of all men who have shared time with knives, whatever their nature, from the first man to use a knife to those of tomorrow. All too many personal thoughts about knives have never been shared openly; thoughts that we, as knife enthusiasts, all know but somehow feel the need to keep to ourselves. Writing for *BLADE* has afforded me the opportunity for open discussion in many areas. I strongly believe that there are many issues which, while there may be no absolutely right or wrong side, should be addressed in order for the knife industry to remain healthy.

One thing I never have been able to predict is the reader response. Some articles that I feel will be highly controversial received very little comment, while other issues that I feel are pretty tame come off like the first shot fired at Fort Sumpter. The most significant aspect of my writing for *BLADE* is the many friends I have never met personally who call or write commenting on the thoughts that I try to convey.

I would like to personally thank all of you who have taken the time to join these discussions with me or other knife enthusiasts for, through your participation, the thoughts become complete. You, the reader, are the most significant part of *BLADE*.



At the time he shot this picture of one of his blades, the author wrote on the back of the picture that he thought the piece was his "best knife."



ED FOWLER has carved out a nationwide reputation as a knife maker. He combines that with his writing skills in producing an all-new second volume of more than 60 columns on topics such as function, design, and technique; forging and heat-treating; as well as his philosophy of knives and the world in general. He also discusses industry legends, knife maintenance, the sheep horn style, how to grind blades, hardening vs. tempering, ball bearing steel, and carbon steel.



"I invite you to join me and share thoughts about knives," Ed Fowler says.



Ed shares some of his favorite articles written for *Blade Magazine*:

- Spirit of the Knife
- Sharp Dreams of the Frustrated Warrior
- Sheep Horn Sherky Shuffle
- Ball Bearing Steel – It Just Keeps on Cutting
- Ames Rifleman's Knife
- What Exactly Is a Master?
- Carbon Steel – A Proven Survivor



Ed Fowler's first volume of columns, *Knife Talk: The Art & Science of Knifemaking*, is also available from Krause Publications.

Ed Fowler's first real book was "*King Arthur and His Knights*." Since then he's been on a quest for Excalibur, and the *World Of Knives* is his Camelot. Ed and his wife, Angie, live near Riverton, Wyo., where he ranches, writes, and makes knives. He's a certified ABS Master Smith with more than 40 years of experience. He has been a contributing writer and field editor for *BLADE Magazine* since 1988.



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